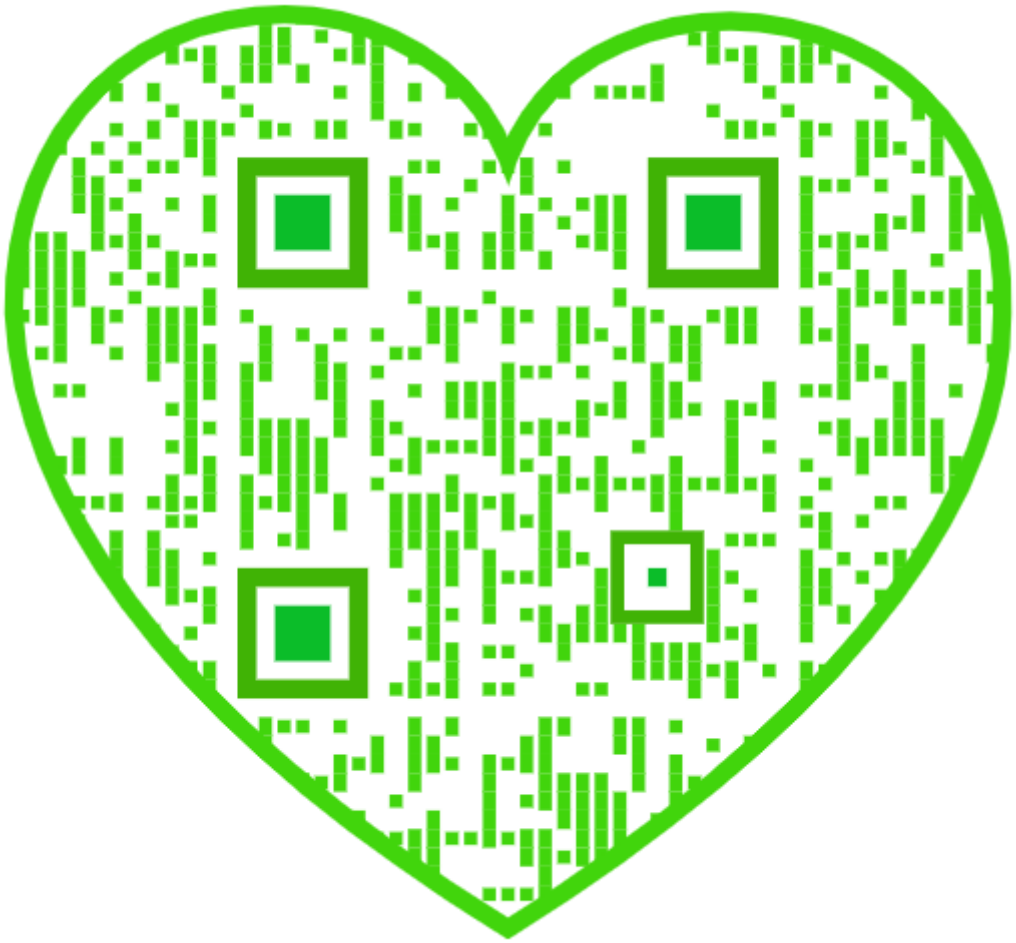
TT 520
.B643



MARGARET J. BLAIR'S

SYSTEM OF

Sewing and Garment Drafting.

ADOPTED BY

PUBLIC AND INDUSTRIAL SCHOOLS.

BY

MARGARET J. BLAIR,

Instructor of Sewing in the School of Agriculture of University of Minnesota.

THIRD EDITION, REVISED.

ST. PAUL, MINN.,
WEBB PUBLISHING CO.,
1904.

TT520
.B643

LIBRARY of CONGRESS
Two Copies Received
DEC 19 1904
Copyright Entry
Feb 28 1904
CLASS a XXc. No.
97647
COPY B.

Entered according to Act of Congress in the year 1900,
By Margaret Blair, in the Office of Librarian
of Congress, at Washington, D. C.

THIRD REVISED EDITION.

Copyrighted 1904 by
WEBB PUBLISHING COMPANY, ST. PAUL.

5-3501 Revised

INTRODUCTION.

The knowledge of making tapestries, embroideries and other beautiful needlework has been known for centuries, but the problem of putting the art of plain sewing on a scientific basis and making it a part of the education of woman is but just being solved.

To meet the demand for practical methods and to supply the want that has been but inadequately met by the use of patterns, the author has prepared this manual. She has arranged it so systematically that it will be of great assistance to the teacher of sewing, and invaluable as a book of reference for the pupil.

The chapters devoted to the manufacture and weaves of materials are intended to aid the teacher in giving talks to her pupils on kindred subjects, also to render the pupil so familiar with the different kinds of cloth that she may become an intelligent judge of them.

Since in any work a thorough understanding of the principles makes it easy, so in sewing, the first step is the inculcating of those principles which are the foundation of needlework, and each part of the work should be so thoroughly taught that the next becomes easy.

Thus, the first year the pupil is taught how to sew, that is how to make the different kinds of stitches, seams and hems, also how to patch, darn and make button holes. The next year she puts that knowledge to a practical use by learning how to draft and make un-

derwear, shirt waists and cotton dresses. These steps thoroughly mastered, the pupil is then ready to take up the study of dressmaking.

For children the work should be arranged somewhat differently, using canvas for the stitches, which are made with bright colored floss.

The progress must necessarily be more slow than with an adult, and when the child has mastered those principles which enable her to work correctly and she is ready for the practical work, she may learn how to draft and make garments for a doll. Having accomplished this, the pupil has a correct standard established and is able to distinguish between the excellent and the worthless, and to judge of the quality of her own work.

As has been said, the aim of the system is educational. It was planned to train the eye to see correctly, the mind to direct with facility and the hand to execute with care and precision.

There is nothing in the line of art needlework in this course, but such mastery does the training give the child of herself, and the materials and implements used in sewing, that it has been found that children who have finished it can, with very little instruction, do very beautiful work of this kind. It is easy to understand how this training fits a girl to successfully undertake the finest art needlework, as she is not only trained to skill with a needle, but her sense of proportion is cultivated; her eye trained as to color, and her mind made flexible and creative by being educated to work independently.

TABLE OF CONTENTS.

ADULT'S GARMENTS 103
Drawers, Illustrated 103
Drawers' Band, Illustrated 104
Underskirt, Illustrated 106
Yoke for Underskirt, Illustrated 108
Nightgown, Illustrated 110
Nightgown Sleeve, Illustrated 115
Chemise, Illustrated 117
Corset Cover, Illustrated 121
Seamless Corset Cover, Illustrated 126
Combination Suit, Illustrated 128, 129
Shirt Waist, Illustrated 132, 133
Shirt Waist Sleeve, Illustrated 137
Table of Measurements for Five Gore Dress Skirt 140
Dress Skirt, Illustrated 141-143
Furnishings for Skirt 149
Plain Waist, Illustrated 150
Collar 156
Plain Sleeve, Illustrated 157
Furnishings for Waist 161
Waist with a French Bias Dart, Illustrated 162
Princess, Illustrated 167
Jacket Illustrated 173
Jacket Collar 178
Jacket Sleeve, Illustrated 179

CHILDREN'S GARMENTS 78
Drawers, Illustrated 78
Drawers' Band, Illustrated 79
Nightgown, Illustrated 80
Nightgown Sleeve, Illustrated 83
Apron, Illustrated 85
Waist, Illustrated 88
Sleeve, Illustrated 91
Collar 92
Boy's Sailor Waist, Illustrated 93
Collar and Band 96
Blouse Sleeve, Ilustrated 97
Boy's Pants, Illustrated 99

CLOTH 30

COTTON 17
Width of Muslins 18
Cotton Dress Materials 19

DARNING 58
Three-cornered Darn, Illustrated 59
Stockinet Darning, Illustrated 59, 60
Linen Darning, Illustrated 61
Stockinet Web Stitch, Illustrated 62

DOLL'S GARMENTS, Illustrated 73
Drawers 73
Skirt 74
Table of Measurements 74
Chemise 76

DRESS 181

FACTS WORTH REMEMBERING 185
Mercerized Cotton 185
Linen 185
Damask 185
Selvedges 185
Skirt Braids 185

Haircloth 185
Pressing Seams 186
Mending Gloves 186
Sewing Machine 186

FASTENINGS 63
Buttonholes, Illustrated 64
Buttons, Illustrated 65, 66
Hooks and Eyes, Illustrated 67
Loops, Illustrated 68
Eyelets, Illustrated 68

GATHERING, Illustrated 52

GAUGING 53

GUSSETS, Illustrated 54

HEMS 46
Faced Hem 47
Extension Hem 48
Rolled Hem, Illustrated 48
Hemstitch Hem, Illustrated 48
French Hem 49
Blind Hem 50
Slip-stitch Hem 50

LINEN 25
Width of Linen Fabrics 26
Linen Dress Materials 26

MITERED CORNER, Illustrated 51

PATCHING 56
Overhand Patch, Illustrated 57
Hemmed Patch, Illustrated 57
Flannel Patch 58

PLACKETS 53

SEAMS 45
French Seam 45

Dorothy Seam 45
Felled Seam, Illustrated 45
Hemmed Seam 46

SEWING ON OF TAPES, Illustrated 55

SILK 27
Silk Dress Materials 29

STITCHES, Illustrated on Canvas 37
Running Stitches 38
Basting Stitches, Illustrated 38, 39
Backstitch, Illustrated 40
Half-back Stitch 40
Overcast Stitch, Illustrated 40
Overhand Stitch, Illustrated 41
Catstitch 41
Chain Stitch, Illustrated 42
Feather Stitch, Illustrated 43
Loop Stitch 43
French Knots, Illustrated 44

TAKING MEASURES, Illustrated 69
Waist Measurement 69
Sleeve Measurement 70
Shirt Waist and Nightgown Sleeves 71

THE SEWING BASKET 31
Shears 31
Needles 32
Thread 33
Thimbles 34
Emery 34
Pins 35
Beeswax and Tapeline 35

WOOL 20
Woolen Dress Materials 23

COTTON.

The cotton plant is now cultivated on plantations all over the world within the limits of 36 degrees north and south of the equator. All the species are perennial, and grow somewhat shrubby; but in cultivation they are usually treated as annuals, the seed being sown early in the spring, the plants beginning to bloom in June. The leaves grow alternate, and the flowers, which are large and yellow, become a clear pink on the second day. After the flower falls the seed pod grows quite rapidly. When ripe it bursts open, disclosing three or five cells filled with numerous black seeds covered with a beautiful, white fibrous substance. This is cotton, ready for picking, which is done either by hand or by machine.

The cotton of commerce is procured from the sea-island and the upland cotton, so called because the one grows on the islands near the coast of the southern United States, and the other on the uplands of the southern states. The sea-island cotton has a fine, soft, silky staple, or fibre, nearly two inches long. The upland cotton, because of its short fibre, is commonly called "short staple" cotton. As the commercial value of the cotton depends upon the length and tenacity of the fibre, the sea-island cotton is the most valuable. As an article of commerce it exceeds all other staples in importance. Great Britain uses more of the raw

material than any other country. The United States ranks second, and France third. The manufacture of cloth from cotton dates back to a very early period, and it has always been the clothing material of a large portion of the human race. Cotton cloth was originally obtained in Europe from India, a country always famous for the excellence and fineness of its cotton fabrics. In the early part of the eighteenth century it was thought that the importation of cotton fabrics into England interfered with the home manufacture of woolens and linens; hence, in 1721, not only was the importation of cotton cloths prohibited, but those who sold and wore them were fined. During the present century an immense industry in the manufacture of cotton in cloth has been established in England and the United States.

The machinery used in the making of cotton fabrics is practically the same as that used in the manufacture of woolen materials.

WIDTHS OF MUSLINS.

Long cloth	36 inches
Lonsdale cambric	36 inches
Berkeley cambric	36 inches
Pride of the West muslin	36 to 45 inches
Alpine Rose Muslin	36 inches

Heavy Muslins.

New York Mills	36 inches
Wamsutta	36 inches
Utica	36 inches

Medium.

Masonville .....36 inches

Fine.

Fern .....36 inches

COTTON DRESS MATERIALS.

Batiste closely resembles lawn, except in the finish, which is more wiry.

Cambric in cotton is an imitation of linen cambric. It is usually white, printed with small designs.

Chambray is woven like zephyr, except that it is stronger and thicker.

Crepon is a fabric woven in cotton, in imitation of the wool and silk crepons.

Dimity is a thin material corded with a fine cord, either lengthwise or in checks. It comes in white and colors, and is commonly used for summer dresses.

Flannelette is a cotton fabric woven and finished in imitation of flannel. The nap is thicker than on flannel.

Galatea is a strong, heavy cotton material (usually striped), used for boys' summer suits and dress skirts.

Gingham is a smooth fabric, usually woven in checks. The yarn is dyed before weaving, so that the cloth is alike on both sides. The warp and woof are of the same size.

Lawn is a cotton imitation of linen lawn, which it resembles, except in the finish, which is more soft.

Muslin is a fine, thin cotton fabric, always woven

plain, and generally made only in white. Book muslin, mull, Swiss muslin, Victoria lawn and Madras muslin are all muslins with slight variations in the thickness or finish.

Pique is a firm cotton fabric, originally made with a cord running from selvedge to selvedge. Many fancy weaves of the same material are now made. Cotton Bedford Cord and Marseilles closely resemble pique and are often mistaken for it.

Print is a standard cotton fabric with the pattern stamped or printed on the right side only.

Sateen is a cotton fabric woven in imitation of satin. It comes in light weight for dresses, in a heavy, mercerized quality for underskirts and linings.

Tissue is a very thin fabric woven like gingham. In the checks each color is usually separated from the joining one by a fine cord.

Zephyr is a weave of gingham, and can be distinguished from it by its finer, more silky appearance, and by the warp being coarser than the woof, thus causing the check to be uneven.

WOOL.

Wool is a variety of hair, or fleece, which is shorn from sheep, the angora, alpaca and cashmere goats, and furnishes the most important material for clothing in all cold and temperate climates. Wool is always more or less wavy, and under the microscope is seen to be covered with scales overlying each other. These conditions of the wool are what cause the fibres to retain

their twisted state after being spun. When wool is shorn from the sheep it is divided into two classes, short or carding wool, which seldom exceeds a length of three or four inches; and long, or combing wool, varying in length from four to eight inches. Each of these classes is subdivided into a variety of sorts, according to the fineness and soundness of the staple or fibre. The finest wools are usually of a short fibre. By combing, some of the scales are removed from the wool, and it is better adapted for the manufacture of light fabrics. Yarn made from this wool is called "worsted," and the cloths, "worsted goods." The finest carding wools were formerly obtained from Spain, from the Merino sheep; but as this class of sheep is now raised in Australia, North and South America, and South Africa, it is more easily obtained and less expensive than formerly. Wool is the most important of all animal substances used in manufacture, and ranks next to cotton as a raw material for textile fabrics.

The spinning and weaving of wool into cloth dates back to very ancient times. At the time of the Macedonian Conquest (336 B. C.), we read that the natives of India wore shawls of great beauty. The Greeks learned the manufacture of woolen fabrics from the Egyptians; the Romans from the Greeks; and the Britons derived their knowledge of the art from the Romans soon after the Roman Conquest. The English improved upon the methods previously known until the knowledge has become general throughout the world. It is diffi-

cult to decide which country produces the best fabrics at the present day, so great is the competition.

The manufacture of wool into cloth is a very interesting process. After the sheep are washed and sheared the wool is sorted, the carding wools being separated from the combing wools. When sorted, the wool is thoroughly beaten, not only to remove all dust and other impurities, but to open the fibres and render the material softer and more pliable. The wool is then scoured; that is, dipped in an alkaline dye, which, with the natural grease in the fleece, forms a soap and cleans the wool thoroughly. The more gently and uniformly the wool is then dried the better the result. But after being dried the wool is still found to contain matted locks, dust, sand, and other impurities, which must be removed. This is done by passing the wool through a "teasing" or "willowing" machine. After being sprinkled with olive oil, to make it soft and pliable, the wool is carded. Any remaining sticks or lumps are removed and the fibres separated, and then interlaced with each other, coming out in the form of a loose rope called "sliver." This rope is passed through a gilling machine several times until the fibres are leveled and brought evenly together. The wool is next drawn out into a soft, weak thread, preparatory to spinning. If the fabric is to be yarn dyed, it is done at this time; and then the yarn is woven into cloth. The process of cleansing, scouring, and pressing the fabric is called "fulling." The cloth is soaked in hot, soapy water, then pressed and rubbed between the rollers of the mill-

ing machine. On being taken from the machine the cloth is stretched uniformly in all directions by hooks on a frame, that it may dry without a wrinkle or curl. The nap is then raised by passing the cloth before cylinders, on the face of which "teasel" has been arranged. The pile is then trimmed to produce a uniform surface, and the cloth passed between steam rollers, to give it a smooth, glossy finish. The cloth is then folded ready for the dealer.

WOOLEN DRESS MATERIALS.

The woolen dress materials most in demand are of two kinds, either plain dyed fabrics or those of mixed yarn effects. Of the former Broadcloths are in the lead. Like all plain dyed goods, they are made in the gray and dyed to any color required. Broadcloth is an all-wool fabric, with a twill back and a finished surface. The nap is worked out of the body of the cloth by a process of carding or teaseling; it is then sheared by passing through a machine which cuts the nap down, after which it is brushed with stiff brushes, giving it the luster and finish peculiar to a broadcloth. Venetians are finished in a similar way, but usually with less finish than a broadcloth, and with the twill on the face side.

Prunella is a very desirable dress fabric, being lighter in weight and handsomer in finish than either of the cloths previously described; but like them it is made in the gray and dyed to the desired color afterwards. Pru-

nella has a perfectly smooth surface of very high finish, and made with a twill or cord on the face side. Broadcloths, Venetians and Prunellas are made in this country, but the older countries, Germany, France and England, excel in the construction and finish of these, as they do in all other fine wool fabrics.

Serges are smooth, hard finished, twilled fabrics, and are nearly always alike on both sides.

Cheviots are made like serges, but are of a slightly different yarn and with a crisp, rough finish.

Cravenette is a name applied to the finish which can be put on any all-wool fabric. It is a process of dyeing or finishing which renders the cloth proof against moisture. It is made waterproof without closing the pores of the cloth, thus rendering it cooler and more comfortable for the wearer than gossamer. The process was discovered and patented by an Englishman, Craven by name, hence the name Cravenette. There are numerous imitations, both in this country and abroad, but none compare with the original.

Of the second class, or mixed yarn fabrics, Covert Cloths have the first place. They are heavy in weight and are brought out in grays, Oxford or black gray mixtures, castors, browns and blues. With a smooth twill face, which shows plainly and are most desirable in colors in the order given.

Heavy weight mixed yarn Cheviots are also very desirable in the same colors as Covert Cloths.

Ziboline is a soft twisted yarn fabric, with a long,

smooth, hairy surface. It is made of long fibre, coarse wools, and then passed over the teasels, a nap is drawn from the body of the cloth which, when brushed, produces a surface like fur.

LINEN.

Linen thread and cloth are made wholly from the fibre of flax or lint. The principal fabrics included in the term "linen" are lawn, cambric, batiste, damask, etc. In France and The Netherlands the manufacture of linen has reached its greatest perfection. The stimulus to produce fine yarns for the lace makers has caused so much care and attention to be given to the cultivation and preparation of flax in these countries that in point of fineness of fibre their product is unequaled by that of any other country. The common flax is an annual, and grows two or three feet high, branching near the top, and having beautiful blue flowers. The plant is highly valuable, both for the fibres of its inner bark and for its seeds. No plant not yielding food is more useful to man. Flax is a native of Egypt, and has been cultivated from the earliest times. It is mentioned in the Book of Exodus as one of the productions of Egypt in the time of the Pharaohs. The wonderful durability of the linen made by the Egyptians is proven by its existence on mummies, some discoveries showing the linen to have been woven over 1,700 years. From the time of these ancient Egyptians to the present time the use of linen for clothing and other purposes has been continuous.

Linen was first manufactured in England in 1253. As late as 1870 there were only ten establishments for the manufacture of linen fabrics. Five more were established before 1880. When the manufacture of cotton fabrics was introduced, the manufacture of linen fabrics was retarded; but it has increased so materially within the past few years that it has regained, if not exceeded, its former proportions. Flax is cultivated in the United States more for the seed than the fibre. The process of the manufacture of linen fabrics is similar to that of cotton and wool fabrics.

WIDTH OF LINEN FABRICS.

Linen sheeting	72 to 108 inches
Pillow case linen	36 to 54 inches
Household linen	36 to 45 inches
Art linen	36 to 45 inches
Shirt bosom linen	36 inches
Surplice linen	36 to 45 inches
Dress linens	27 to 36 inches
Linen cambric	24 and 36 inches
Linen lawn	24 and 36 inches
Handkerchief linen	24 and 36 inches
Table linen	54 to 108 inches
Circular tablecloths	2 1-2x2 1-2 yards
Circular tablecloths	3x3 yards
Napkins	18x18 to 27x27 inches

LINEN DRESS MATERIALS.

Cambric is an extremely fine white linen woven from

very fine yarn. It is generally used for pocket handkerchiefs.

Lawn is a very thin linen, having a softer finish than the cambric.

Holland is a linen fabric first manufactured in Holland. It is fine, thin, and the threads are flat. It is generally made in a drab or light brown color. The colored linens have become more popular, as they come in both plain and fancy weaves.

SILK.

Silk is a fine, soft thread spun by the silk worm. The manufacture of silk appears not to have been well known to the ancients. Among the Greeks, Aristotle was the first to mention it in his writings. Evidence collected would tend to show that the manufacture of silk fabrics originated in China, in which country the cultivation of silk is of the greatest antiquity. According to Chinese authorities, silk worms were raised by the wife of the emperor two thousand six hundred years B. C. The cultivation of silk has become one of the great industries of Italy, Turkey and Greece. Some efforts have been made to raise the silk worm in England, but with only partial success, for it requires a warmer and less variable climate. And yet the quantity of silk raised in the world is enormous, considering that it requires one thousand six hundred worms to produce a pound of silk. Only a brief outline of the cultivation of silk and its manufacture can be given here, but a fur-

ther study of the subject will prove most interesting. The moth from which silk is produced is about an inch in length, of a whitish color, with a broad, pale brown bar across its upper wings. The caterpillar, which at first is not more than a quarter of an inch in length, rapidly increases in size until, when full grown, it is nearly three inches long, and of a yellowish gray color. The eggs are numerous and about the size of a pin head. In tropical countries the eggs hatch readily from the natural heat, but in temperate climates artificial heat is used. At one time cultivators resorted to the novel practice of wearing a little bag containing the eggs next their person. The worms are usually raised in buildings especially prepared for them, and fed on leaves gathered from day to day. It is of the greatest importance in the production of silk that one of the species of the mulberry be cultivated, and that the foliage should be just right to feed the worms when they are first hatched. Great care is taken in feeding to have the leaves evenly distributed, so that the worms will not crowd together. To prevent the stronger insects from depriving the younger ones of food, those of an age are kept together.

Different devices are used upon which the worm spins its cocoon. When completed they are carefully sorted, and placed in an oven to kill the enclosed chrysalis. The cocoons are then placed in warm water to soften and dissolve the glue, which causes the various coils of silk to adhere to each other. Several of the

loosened ends are twisted together in the fingers into one thread, and passed into the reeling machine. Each cocoon generally yields three hundred yards of thread; so that it takes from one thousand two hundred to one thousand five hundred yards to make three hundred yards of the "filament of raw silk," as the reeled silk is called. The silk is not yet ready for the weaver, but goes through several processes before it is properly cleaned, twisted, and strong enough.

Of textile fabrics silk is the strongest, most lustrous, and most valuable. The first silk mill in the United States was established at Mansfield, Conn., in 1810. Many other factories were started, most of them still surviving. One of the best known was at Patterson, N. J., and that town became, and has since remained, the chief seat of silk manufacture in the United States.

SILK DRESS MATERIALS.

Brocade is a silk with a pattern on a satin ground. It is not woven double except through the figures. The patterns are similar to those used in damask.

Corded Silk is similar to gros grain, except that the cord is rounder and varies in thickness from a very fine to a very coarse cord.

Faille Francaise is also very much like gros grain; but is brighter and much softer.

Gros Grain is a firm, rather dull silk, woven with a flat cord from selvedge to selvedge.

Grenadine is a silk net or gauze, sometimes woven

plain, but more often striped or with a pattern woven in it.

Ottoman is a thick corded silk, used more for wraps than dresses. It is corded with one thick, bright cord each side of two or three fine cords. The name "Ottoman" is applied not only to silks corded thus, but also to other materials.

Surah Silk is a soft, bright, thin silk, twilled on both sides.

Satin has a soft, glossy finish on the right side. This result is obtained by one thread of the warp being taken up and four left on the surface.

Taffeta is a smooth, firm silk, alike on both sides. It is thick and lustrous, and is used not only for dresses, but also for linings and underskirts.

Wash Silks are those which can be washed without injury. The foulard is a soft, twilled wash silk. It is printed in colored designs. The China and India silks are smooth, plain wash silks with a soft finish. The China and India silks are often mistaken for each other, but the China feels softer to the touch than the India. The Pongee is an inferior kind of India silk, and comes only in the natural color.

CLOTH.

Cloth is a fabric woven of cotton, wool, linen, or silk. The threads of the cloth are called the "warp" and the "woof." Those running lengthwise are the warp, and the crosswise threads, the woof. The warp is stronger

than the woof. Cloth is woven straight. It is sometimes drawn out of shape in pressing, but it can be straightened by stretching it on the bias. When the thread can be ravelled either lengthwise or crosswise of the cloth it is straight, or will become so after it has been laundered. The raw edge is the edge that is cut or torn. A fold is made by doubling one part of the cloth over another. Nap is the shaggy substance on the surface of the cloth.

THE SEWING BASKET.

The sewing basket, which is often used as a catch-all, is very essential to the seamstress, since it is a receptacle for the implements she uses in sewing,—her shears, needles, thread, thimble, emery-bag, pins, beeswax, and tape line.

The art of sewing is one of the oldest in existence, but as civilization and refinement have progressed the texture of raiment has become finer, the construction more intricate, and the implements necessary to fashion them have also improved in quality. We find, in garment making, as in any other kind of work, that our success depends largely upon the implements used in preparing the work and the manner in which they are used.

Shears:—The first thing needed is a suitable pair of shears, so that the garment may be cut properly. Bent shears are the best for cutting heavy material, as they are so shaped as to raise the cloth as little as possible

from the table, and thus prevent any slipping of the under layer of the material. In choosing a pair of shears select those with long, sharp blades. If less than six inches long they are scissors. They should never be so tightly joined that any resistance will be noticeable when opening and closing them. The shears should be kept properly sharpened so that in cutting a garment the cut edges will be even, clear cut, and smooth and thus aid the seamstress to baste and sew the seams evenly. Avoid dropping the shears or scissors upon the floor, as the concussion they sustain often loosens their adjustment, and they cause uneven cutting.

Needles:—The implement next in importance in the sewing basket is the needle. It is the one that has been in use the longest, having been used by the women of every country, in every age. In earliest times needles were made of fish bones and of ivory. In the Egyptian tombs needles of bronze have been found. Steel needles originated in Spain, and during the reign of Queen Elizabeth they were introduced into England, in which country they are now almost exclusively manufactured. The common sewing needle is made from steel wire, and, although simple in form, it passes through the hands of a hundred workmen before completion. Needles are of various sizes and kinds. There are those for sewing straw, for darning, for the milliner's use, and for plain sewing. The needle best adapted to the kind of work in which it is to be used should always be chosen. Those used for plain sewing are Sharps,

Ground-downs, and Betweens, ranging in size from No. 1 to No. 12, the latter being the finest. Sharps are long needles. Ground-downs are shorter, and are excellent for school use, as they do not bend or break easily. Betweens are short needles, and are used for heavy work. Each paper contains twenty-five needles. In a package numbered 5 to 10, there are three No. 5 needles in the middle, which should be used only with very coarse thread. The needles on each side are alike, and the two next to the middle are No. 6, used for sewing on coarse materials. Next are the three No. 7 and three No. 8, for stitching, basting, gathering, and sewing on buttons. Then there are two No. 9, for hemming on cotton cloth. The last one is a No. 10, for very fine work. The amateur seamstress often makes the mistake of using too coarse needles and thread, thus interfering with neatness in her work. To determine the size needle to use, select thread the same size as the threads in the material on which it is to be used; then use the needle a trifle larger than the thread. A bent needle should never be used, as it makes uneven stitches and renders it more difficult to keep the line of stitching straight.

Thread:—Thread is a twist made from flax, silk, cotton or wool. When cotton thread was first made, eight hundred and forty yards of it weighed one pound. This was called "No. 1," and if a pound contained just twice this number of yards it was called "No. 2," and so on. The manufacture of white sewing thread, known as

"ounce thread," was begun about 1750, in Scotland. Later it was introduced into England. The invention of the sewing machine demanded a smoother and finer thread, so that a six-cord thread was made instead of a three-cord, the size remaining the same. The largest thread factories are in Scotland, although there are some large factories in America. The sea-island cotton is used principally in the manufacture of cotton thread. Linen and cotton thread are numbered with figures. The finer the thread the higher the number. Silk thread is numbered with letters. Thread must be chosen to suit the material to be sewn, and should always be cut, not broken.

Thimbles:—The implement next in importance is the thimble. The first one seen in England was made in London about two hundred years ago, by a metal worker named John Lofting. At first it was worn on the thumb, and was called a "thumb bell," from the Scotch word "thummel." Lofting manufactured thimbles of both iron and brass, many specimens of which are still preserved as heirlooms. Gold, silver, iron, ivory, steel, pearl, celluloid, and sometimes glass, are utilized in making thimbles at the present time. In manufacturing metal thimbles a thin piece about the size of a half dollar is cut from sheet metal and then pressed into shape and indented. Celluloid is molded. The best thimbles are said to be made in France. In China, the ladies of high degree use very dainty thimbles. Some are carved from enormous pearls, with bands of fine

gold, on which are etchings, which serve to catch the needle as do the holes in our thimbles. These thimbles always have a mother of pearl case.

Emery:—The emery ball is an important adjunct to the sewing basket, though often omitted. Its frequent use renders the needle more pliable and the work neater. The emery with which it is filled is a variety of corundum found in various parts of Europe, Asia Minor, Greenland, the Island of Naxos, and in several parts of America. It is sometimes of a Grayish black, and sometimes of a bluish color. It is generally found in a massive form, and is prepared for use by breaking it into small lumps, then crushing these into powder. The emery of commerce is obtained chiefly from the Island of Naxos.

Pins:—A paper of pins or a small pin cushion is also essential to the furnishing of the sewing basket, and should be selected with care. The thick, dull-pointed pin is injurious to fine materials, as it not only makes large holes, but draws threads. The fine, sharp-pointed, English pin is the most desirable made. Pins have been in use since the latter part of the fifteenth century. At first they were made from iron wire, which was later substituted by brass wire. Like the needle, this small article requires a vast amount of labor in the making. A paper of pins contains three hundred and sixty pins.

Beeswax and Tape Line:—In fitting up a sewing basket a cake of beeswax and a tape line should not be

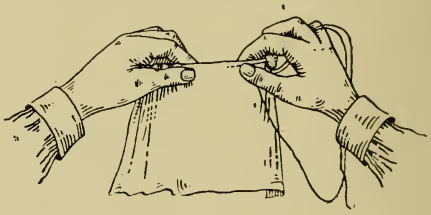
omitted. Thread properly waxed not only keeps from knotting, but is more durable. A tape line should be sixty inches long and contain the eighths of inches. In selecting a tape line choose a cloth, stitched on both sides, finished with brass ends. It is perhaps needless to add that the sewing basket of the true gentlewoman is always neat and in order.

STITCHES.

Needlework is very interesting, especially to young children, and it is important that much attention be given to details of education, which, if carefully passed

over, may prove almost incurable in after years. Great care should be taken in teaching a pupil the stitches. In sewing, as in embroidery, the beauty of the work

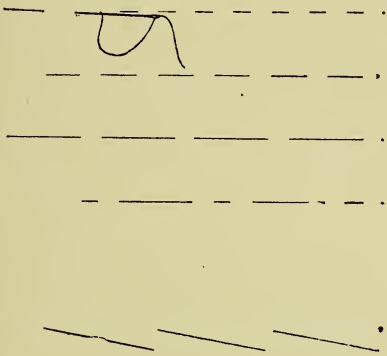
depends largely upon the evenness and smoothness of the stiches. Those that are irregular should be removed and more perfect ones substituted, thus training the eye as well as the fingers to be accurate. The needle and thread should correspond in size to the quality of the material upon which it is to be used. The thread, which should not be longer than the length of the arm, should pass between the middle and fourth fingers of the right hand when drawn up from the work, thus making the stitches draw more evenly.



Running Stitches:—Running is composed of small basting stitches of equal size. The needle should be a little larger than the thread, and the thread the size of the thread of the material. Running is used in plain seams that do not require great strength, as for joining light materials, gathering, making tucks and pleats, and also in making cord. Several rows are used in darning, strengthening worn materials, and for quilting. In running use as free wrist motion as possible, and take as many stitches on the needle at a time as is practicable.

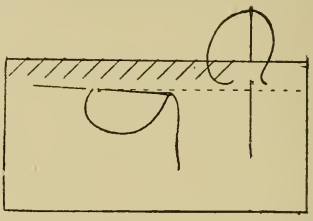
Basting Stitches:—Basting is light stitching, which

is used as a guide for sewing and to keep two pieces of cloth in exact relation to each other. Never sew without first basting. The knot should not be concealed in basting, but should be on the right side of the work. The thread should be fastened by taking two stitches in the same place over each other. In basting for ma-



chine sewing, the stitches may be longer than for hand sewing. Uniformity in length of stitches and straightness of line in basting are of the utmost importance. The stitching should never run into or across the basting thread, so that in removing the basting the line of stitching may not be broken. Always cut the bastings at short intervals, that they may be taken out easily. Regular basting stich, one-eighth by one-eighth of an inch, should be used in basting seams that are subject to any strain, as in fitting a waist. Regular basting stitch, one-eighth by one-fourth of an inch, is used in

basting for over-handing and machine sewing. For overhanding, baste one-eighth of an inch from the edge, whether selvedge or crease, as the edges need to be held firmly together. In basting a hem, take one stitch at a time, and be sure both folds of the hem are held in place. Use one-eighth by one-half inch basting stitch. A basting stitch one-eighth by three-fourths of an inch is used for basting seams in skirts, and the crosswise basting is used in basting material on a lining.

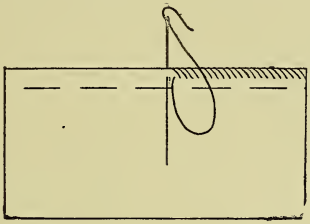


Backstitch:—Backstitching is a method of sewing by which the stitches are taken backward; the needle entering the material adjoining the preceding stitch, and coming out so that the stitch on the under side is twice the length of the upper. In fine needlework it is used instead of machine sewing in all places requiring strength.

Half Backstitch:—Half back stitching is the same as backstitching, except that the needle is put only half way back to the preceding stitch, thus leaving a space between the stitches. It is used in sewing on gathers.

Overcast Stitch:—Overcasting is a diagonal stitch taken loosely through and over two raw edges of cloth

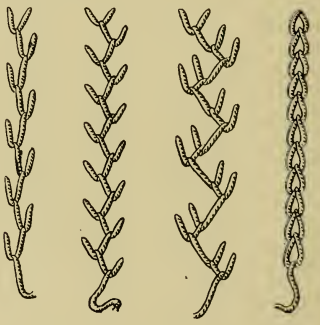
to keep them from raveling. It is worked from left to right. To make the stitches uniform the distance between them and the depth of each should be the same. Before overcasting a seam remove the basting threads and trim the edges evenly. It is very difficult to learn to overcast nicely.



Overhand Stitch:—Overhanding is a method of sewing together either two selvedge edges or two creased folds of cloth. The stitches are taken over the edges, working from right to left. Care should be taken that the stitches be of the same slant, not too far apart, and not too deep. If the stitches are drawn too tight, a ridge, which should be avoided, will be formed. The threads of the warp and woof should correspond exactly in the two pieces joined. In joining material that has a pattern on it, great care should be exercised to see that the design is perfectly carried out.

Catstitch:—A catstitch is a crosstitch worked from one, holding the material over the left forefinger. Bring the needle up through the material; find the required width and slant of the stitch, and put the needle down through the material, taking a short stitch from

side to side with the needle pointing to the left. Bring the next thread down at right angles to the first and take a stitch to the left as before. Care must be taken to space the stitches evenly and make them of the same length on either side. This stitch is sometimes called "herringbone," and is used to catch open the seams of flannels, in patching flannel and on raw edged hems, to avoid the ridge formed by folding the edge. It is as useful as it is simple.



Chain Stitch:—Chain stitching is a method of embroidering often used for outlining patterns. It is worked towards one. Bring the needle and thread up through to the right side of the material. Put it down again at the right of the point where the thread leaves the cloth, and bring the point of the needle up a little in advance. Pass the thread under the point of the needle from left to right and draw the needle through. Insert the needle again just beside the thread as it leaves

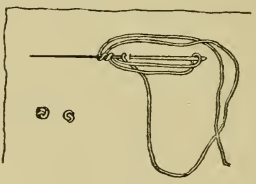
the material and inside the loop, and the same stitch is repeated. The result is a series of stitches resembling the links of a chain. The stitches should be uniform, and not drawn too tightly.

Feather Stitch:—Feather stitch, or brier stitch, is often used in embroidery and fancy work, as well as in sewing. To make this stitch bring the needle and thread up through the material, which should be held over the left forefinger. Take a short, slanting stich, bringing the needle out over the thread, which is held down by the thumb. Take the second stitch on the opposite side, pointing the needle towards the line on which you are working. Two or more stitches, instead of one, may be taken on each side. (See illustration.) This stitch is used extensively in finishing the seams, hems, and tucks of flannel garments. The beauty of feather stitching is in uniformity of the stitch.

Loop Stitch:—Loop stitch is worked from left to right, holding the edge of the material towards one. To begin, run two or three stitches along the edge, worked so that the continuous line of stitches cover them. Hold the thread with the thumb of the left hand. Insert the needle an eighth of an inch from the edge of the material. Bring it down and over the thread, being careful that the thread lies loosely on the edge of the cloth. Fasten the thread on the wrong side of the work. To join the thread put the needle in under the last stitch, as at the beginning, and draw it out over the last stitch. Loop stitch is used to secure

and ornament the edges of woolen materials. It is also used for working the edges of doilies, by making the stitches close together. Several rows are used in honeycombing and fancy German stitches.

French Knots:—To form a French knot, draw the needle and thread through to the upper side of the fabric, and take one short backstitch. Without drawing the needle through, take the two threads at the eye of the needle, and bring them around from right to left, casting one or more stitches on the needle, according to the size desired. Draw the needle through, holding



the stitches firmly with the thumb of the left hand. Put the needle back through the material at the same point at which it was brought up. Several knots can be made without fastening the thread. Another method of making a French knot is to draw the needle and thread through to the upper side of the material. Hold the needle in the right hand, and with the left take hold of the thread near the cloth and twist the needle around the thread three or four times. Then put the needle down through the fabric close to the point at which it was brought up. Hold the thread firmly near the cloth so that it may not untwist or knot while being drawn

through. The size of the knot depends upon the number of times the thread is wound around the needle. French knots are used chiefly in embroidery work, but they also make very effective trimming on waists or children's clothes.

SEAMS.

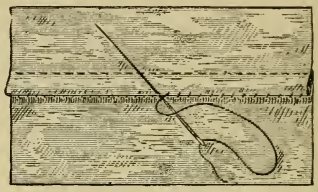
A seam is the joining line formed by sewing or stitching together two pieces of cloth.

French Seam:—A French seam is one that is first stitched on the right side as near the edge as possible. Then the material is turned, and the second stitching is made on the wrong side, far enough below the first stitching so that the raw edge will not show on the right side. This seam is used on shirt waists, sleeves of underwear, and on thin materials that are not lined. This seam gives the inside of the garment a neat finish, and has a nicer effect than if the raw edges showed through the fabric.

Dorothy Seam:—A Dorothy seam is made by covering a seam with narrow ribbon or tape and hemming it down on both sides. It is used on flannel for infants.

Felled Seam:—A felled seam is one that is hemmed down to strengthen it. It is made by first stitching the seam one-fourth of an inch from the edge, then trimming the side towards one, one-eighth of an inch. Fold the untrimmed side over the cut side on the material and hem it down, making a flat seam. The felled seam

is used on corset covers, drawers, and the side seams of night gowns. This seam is more easily laundered than the French seam.



Hemmed Seam:—In making a hemmed seam, place two pieces of material overlapping each other about one-fourth of an inch. Baste through the center. Then crease and hem alike on both sides. This seam is used in making infants' flannels, in sewing loosely woven silks, and in all cases where raw edges are to be avoided and other seams may draw.

HEMS.

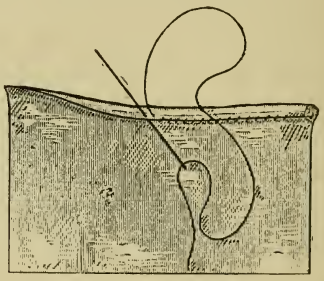
A hem is a fold made by creasing a piece of cloth and then sewing it down. Holding the material in both hands, turn down the edge one-eighth of an inch and crease the fold between the thumb and forefinger of the right hand. If the material is cut bias or likely to stretch, the fold may be creased by pleating in the material with the right hand. The second fold may then be creased the desired width, basted, and stitched. A narrow hem on stiff materials, as table linen, or a rolled hem, need not be basted. When basting a straight hem the seams or stripes should be matched exactly. Hems

on elastic materials that are difficult to fold should be basted twice. First crease an eighth of an inch and baste on the fold. Then turn the hem the desired width and baste on the second fold. In hemming great care should be taken to always insert the needle at the same angle and take the same quantity of material upon the needle. The space between the stitches should also be the same. To join the thread, in hemming, leave the end of the thread in the fold of the hem, and fasten another thread by hiding the knot under the fold. Fasten the thread by taking two or three stitches over each other. Children should be taught to turn hems, practicing first upon print or gingham. When sufficient skill has been acquired they may be given a piece of linen or other material to work on. Much of the neatness of hems depends upon the size of needle and thread used. If they are fine, better results will be obtained.

Faced Hem:—A faced hem is made by sewing to the edge of a garment a piece of cloth the width of the desired hem. Turn up the piece on the line of stitches, baste, and sew as for a plain hem. If the seam is first pressed open the hem can be turned more evenly. This hem is used when the garment is not cut long enough to allow for a hem, or where a hem cannot be turned evenly. It is a finish or protection to the edge of a garment, and has the appearance of a hem. When the edge of a garment is turned up three-eighths of an inch and a bias piece of cloth is basted on and both edges hemmed down, it is called a facing and is said to

be "felled" on. This method of making a faced hem is used principally in finishing sleeves around the hand, and also the bottom of a basque.

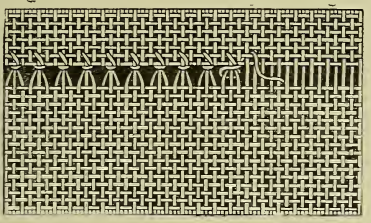
Extension Hem:—Cut a piece of cloth twice the width of the desired hem, and sew one edge on the garment in a seam. Then crease the upper edge and baste on the wrong side, even with the seam, and sew down. This hem is used where there is not enough cloth to allow for a hem, or in a placket.



Rolled Hem:—A rolled hem is a very narrow hem, made by rolling the edge of the material between the left forefinger and thumb, hemming as rolled, with a very fine needle and thread. This hem is used on ruffles of very fine material that are to be edged with lace, or where a very narrow hem is required.

Hemstitch Hem:—Hemstitching is one form of drawn work, and can be used with satisfactory results only upon material from which the threads can be readily drawn. Measure up from the edge of the material twice the width of the hem wanted, and with the

point of a needle pick out one of the coarser threads, removing it carefully with the right hand, so as not to break it. From four to six threads should be drawn, according to the texture of the fabric. The chief difficulty is in drawing the first thread. Turn the hem, creasing the edge one-eighth of an inch, and baste it even with the threads first drawn. Fasten the thread in the hem at the left side, and pointing the needle



towards you take up four or five cross-threads. Draw the needle through and take one stitch, as in ordinary hemming, being careful not to take the stitch too deep. Repeat this until the hem is completed. If both edges of the drawn threads are to be hemstitched, repeat the operation on the other side. Hemstitching is one of the most useful accomplishments of a needle worker. It is one of the daintiest methods of hemming fine materials and one of the neatest methods of finishing the ends of towels, sheets and pillow slips.

French Hem:—To make a French hem, first crease a narrow hem. Then, holding the wrong side towards you, fold the hem back and crease the material, so as

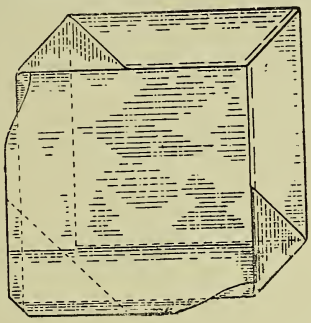
to make it even with the hem. Overhand the folded edges together, being careful not to take the stitches too deep into the cloth. This hem is used in hemming table linen.

Blind Hem:—A blind hem is turned and basted on the right side of the material, and hemmed so that the stitches do not show. Take up one or two threads of the material, and, before drawing the needle through, take up one-fourth of an inch of the fold. Continue in this manner, being careful not to draw the threads tightly.

Slipstitch Hem:—For a slipstitch hem, take up one thread of the cloth; then of the fold a little farther ahead; then of the cloth; etc. Keep the stitches in line with the thread of the material, instead of diagonally, as in regular hemming. This hem is used on woolen materials, where the stitches are not to show on the right side. It is often used in hemming silk or velvet.

MITERED CORNER.

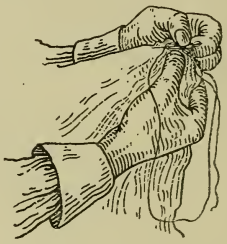
To miter a corner in needlework is to change the direction of a hem, straight band, or border by cutting it at an angle, so as to sacrifice a three-cornered piece. To make this hem cut off the corner one-eighth of an



inch deep. Then, creasing the material each side of the cut corner one-eighth of an inch (see "Hems"), fold the hem the desired width. Open the hems and fold the corner towards you, creasing it one-eighth of an inch outside of the point where the creases of the hems meet. Cut off the corner on the crease. Then fold and baste the hem at the right of the bias edge. Fold and crease the bias edge one-eighth of an inch. Fold and baste the hem at the side, making the edge of the two hems meet at right angles. Hem the corner fold, taking the stitches through only one thickness of cloth. A mitered corner is used on heavy materials. "Miter" is a term derived from carpenter work.

GATHERING.

Gathering is composed of small running stitches, and the thread is drawn so as to full the material. Take as many stitches on the needle at a time as possible, using rapid wrist motion. Draw the stitches together on the needle, and fasten the thread by winding it over and under the eye and point of the needle. Then hold



the gathers between the thumb and finger of the left hand, and with the other pull each gather in place. Unwind the thread and pull the needle through. Repeat with each needleful. Gathering is used in all cases where a piece of material is required to fill a smaller space. The thread should be a little longer than the section to be gathered. Divide both the gathers and the plain material into halves or fourths. Place the marks together and sew the gathers in place with half backstitches, holding the gathers towards you. The size of the gathering stitches should vary with the quality and quantity of material to be put into the arranged space.

GAUGING.

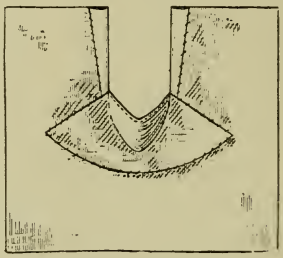
Gauging is two rows of gathering with the stitches of the second row exactly below those of the first. Gather the first row one-fourth of an inch from the edge. Before drawing up the thread, put in the second row of stitches one-fourth of an inch below the one above it. Remove the needle and, taking hold of both threads near the cloth, gradually draw the gathers up to the required width. In heavy materials, and the backs of skirts, the stitches would be long.

PLACKETS.

A placket is an opening made in a garment. To make a placket for cotton garments cut an opening from eight to ten inches. Hem the right side one inch wide, and the left side with a narrow hem. Place the wide hem over the narrow one, and finish at the bottom with two rows of back stitching. To make a placket for woolen garments, cut the opening the same as for cotton garments. Cut a facing for the right side two and one-half inches wide and one-half inch longer than the opening. Fold over the right side of the placket one-fourth of an inch, and baste. The facing should then be basted on and both sides hemmed down. The left side should be made as an extension hem; the piece to be put on being five inches wide and one-half inch longer than the opening. Finish at the bottom by hemming the left side under the right.

GUSSETS.

A gusset is a small piece of cloth inserted in a garment for the purpose of strengthening and enlarging an opening. One method of making a gusset is to cut a piece of cloth two inches square, crease each side one-eighth of an inch, fold so as to form a half square and baste. Beginning at the point, overhand it in the

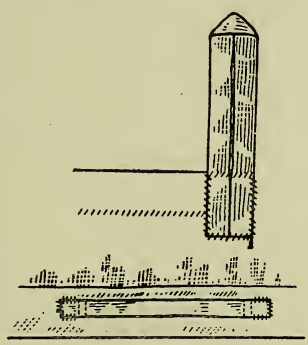


opening. This gusset is used for finishing the under-arm seams of shirts. Another gusset is made by cutting a piece of cloth two and one-half inches square, and creasing two adjoining sides one-eighth of an inch , then inserting the gusset in the opening, which has been hemmed so that at the end where the gusset is to be inserted the hem is as fine as a rolled hem. Overhand both sides of the gusset one-half way up. Fold the gusset over to the wrong side, and crease. Hold in place with the needle, so that the middle falls over the point of the gusset, and cut the square diagonally. Baste to the material and hem. (See illustration.)

The gusset can be made as large or as small as desired. This kind is used principally in plackets of drawers.

SEWING ON OF TAPES.

Sew the tape on the wrong side of the towel, placing the tape so that the raw edges will be towards the end. Stitch it down. Then, turning the tape back so as to cover the stitching, hem it down on each side. This

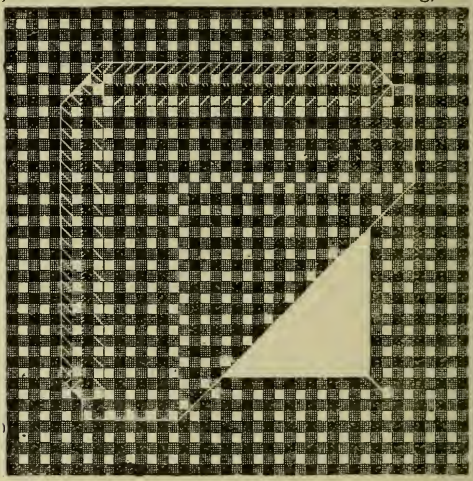


SEWING ON A TAPE.

will prevent the ends from pulling off easily. A flat loop should be sewed on a jacket or skirt band. The ends of the tape should be carefully turned under and hemmed down, then a double row of stitching should be made across the tape about half an inch from the ends. For towels a cotton or linen tape should be used. Woolen or silk tape is best for jackets and dresses.

PATCHING.

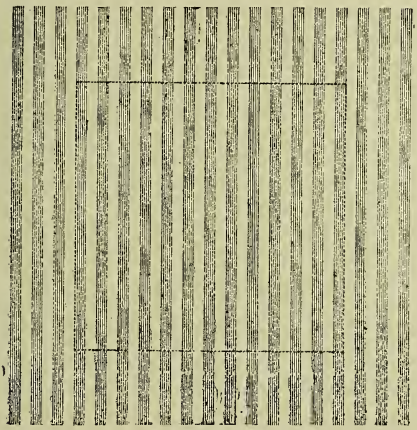
A patch is a piece of cloth sewed on a garment to repair it. All the worn part of the material which surrounds the rent should be cut away, either in a square or rectangular shape, until strong threads are found to support the new piece placed on it. In cutting, follow



OVERHAND PATCH.

the threads of the material. Great care should be taken to have the warp and woof of the patch run the same as those of the garment. Patching should be done carefully so as to be as nearly invisible as possible. Checks, stripes, and figured materials should always match, There are several ways of patching, the overhand and hem patching being used principally. The former is the neater patch, but the latter is the stronger.

Overhand Patch:—In an overhand patch cut the patch one inch larger than the hole. Cut the corners diagonally one-eighth of an inch. Then cut the corners of the hole one-eighth of an inch. Crease one edge of the patch and one edge where it is to be joined each one-fourth of an inch. Place the right sides together, having the folded edges even, and baste. Overhand that side of the patch. Remove the basting. Crease and overhand the remaining sides in the same way, finishing the raw edges with overcasting.



HEMMED PATCH.

Hemmed Patch:—In making a hemmed patch, cut the patch one inch larger than the hole. The corners should be cut the same as for the overhand patch. Place the patch on the wrong side and baste through the center where the two edges lap. Crease the right side one-

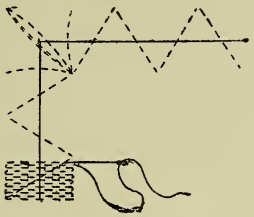
eighth of an inch, and hem. Crease the patch the same on the wrong side and hem. This patch is used where both sides of the garments are to be seen.

Flannel Patch:—In patching flannel cut away the worn and thin parts so as to leave a square or oblong hole. Cut the patch large enough to cover the hole and the worn parts surrounding it, using a piece of flannel of the same weight and texture as the garment to be mended. If the hole has been accidentally torn in a new garment, a piece of new flannel can be used, but if it be an old garment, the patch should be thoroughly washed and shrunk before being used, so that it will wash with the garment. Baste the patch evenly over the hole on the wrong side of the garment, and catstitch it on. Turn the garment right side out and catstitch around the hole, being careful not to leave any of the threads of the fabric free to ravel.

DARNING.

Darning requires more patience and neatness than almost any other kind of needlework, and is an accomplishment of which any one may be proud. As "practice makes perfect," if sufficient time is given to the work the student will soon learn to fill in the rent or hole so carefully and neatly as to be almost invisible. Great care should be taken to have the needle, thread, or darning cotton proportioned to the thickness of the material to be darned. Always darn on the right side of the material, and if it be very thin, or the rent very

large or irregular, baste a piece of pasteboard under the hole, to prevent puckering.

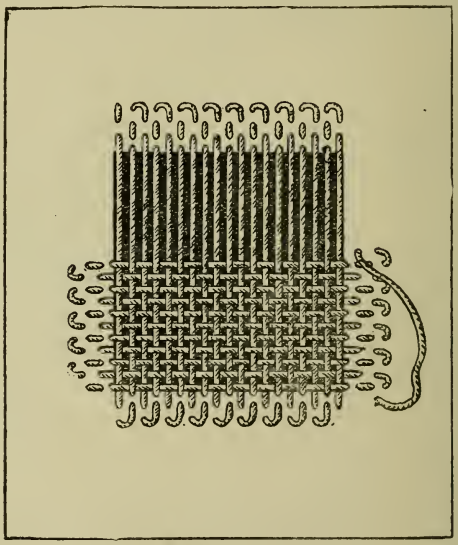


THREE CORNERED DARN.

Three-cornered Darn:—If a three-cornered tear is to be mended, first draw the corners together. Then, holding the edges firmly, run them together (see top of illustration), using the warp of the same material as that being darned. The warp is preferable to the woof, because it is stronger, and when used for mending does not show as plainly as silk thread. The writer has frequently darned a rent in fine cotton materials with 150 or 200 thread very successfully. After drawing the edges of the tear together, begin at the bottom to darn. The ragged edges should not be trimmed, but weave the stitches over and under, so as to fold down each torn thread, being careful not to draw the thread very tight, and thus cause the darn to become puckered. When finished, press the darn on the wrong side, and, if it is well done it can scarcely be noticed.

Stockinet Darning:—For linen, and stockinet web darning, warp and woof threads should be formed. In stockinet darning, cut a hole on a line with the

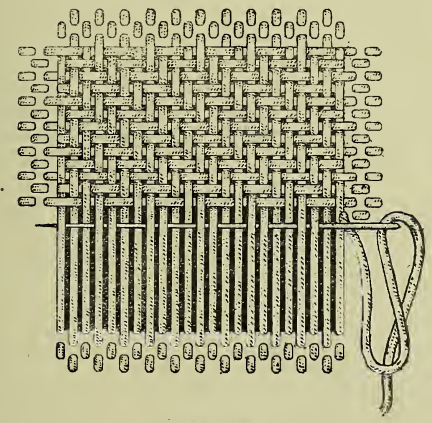
stitches. Remove the cut loops from the edges. Run a thread around the hole, about one-fourth of an inch from the edge. Baste the stockinet firmly to a piece of cardboard, to prevent its being stretched or drawn out of shape. Form the warp threads, which should be very close together, by bringing the darning cotton up through the loop stitch at one edge and down



STOCKINET DARNING.

through the stitch on the opposite edge. All of these stitches should be taken up so that they will not ravel back after the darn is completed, and so that there will be no roughness on the right side of the stockinet. A small loop of the darning cotton should be left at each

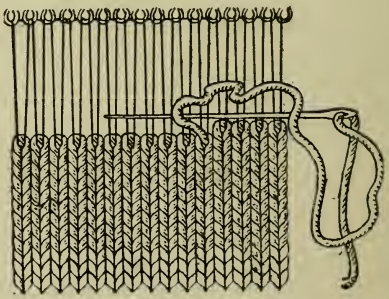
end to allow for shrinkage in washing. When the warp threads are all in, begin at the lower right-hand side of the hole to fill in the woof threads, taking up the alternate threads of the warp. In the next row only those threads missed in the preceding one are taken up. Continue in the same manner until the hole is filled. Both the warp and woof threads should be carried at least one-fourth of an inch beyond the hole in the stockinet, so that the darning may be firm and not pull away from the worn edges of the stockinet.



LINEN DARNING.

Linen Darning:—The clever needlewoman, when darning table linen, crosses her stitches in imitation of the material. Although not quite so easy to learn as the preceding method of darning, when once mastered, the rent can be as readily mended as by any other kind

of stitch. Before darning linen, the edges of the worn or torn parts should be made even. Cut the worn part out square, so that the warp threads can be more easily arranged to correspond to the warp of the material. Take the warp of a piece of linen to darn with, and when finished the mended place will scarcely show. Fill in the warp, carrying it one-eighth of an inch beyond the hole; then, beginning at the right side, fill in the woof threads as follows: In the first row take up two threads, then over two, continuing until the row is completed. In the next row there are two threads the same length, one a little longer and another still longer. In weaving in the second row, take up one of the shortest threads and the one next to the longest; then over the longest and one of the shortest, continuing in this way until the darning is finished.



WEB STITCH.

Stockinet Web Stitch:—Baste the stockinet on a piece of cardboard and cut the hole in a line with the stitches. Remove the cut loops and weave in the warp by catching

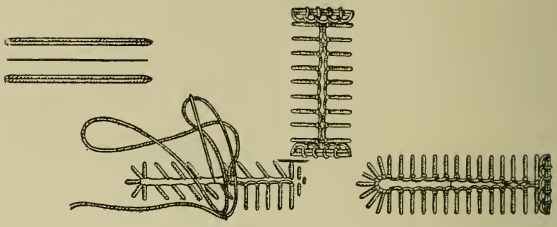
into the stitch at one end, then down through the opposite loop stitch, up through the one next to it, and back through the first one opposite, taking up the next one; continuing in the same manner until all of the warp threads have been woven in. Use a dull-pointed darning or worsted needle, and weave in the woof by putting the needle around two of the warp threads, down through the loop, up through the next one, and so on until across the darning. In turning, bring the needle up through the first loop, then around the first two warp threads, down through the loop, up through the next loop, and around the two warp threads. Continue in this manner until the darning is finished. If this method of darning is carefully followed in mending silk underwear or the knees of children's stockings, it will never be noticed where the piece has been filled in.

FASTENINGS.

Fastenings for dresses vary with fashion. Buttons and buttonholes and hooks and eyes are those most commonly used. For wash garments buttons and buttonholes are preferred to hooks and eyes, as the latter may show a rust stain after laundering. The buttonholes should be made in the right-hand side.

Hooks and eyes are used principally on dresses that are not to be washed, and are sewed to the lining, thus being covered by the fancy front. If sewed on alternately they are less liable to become unfastened. Small sized hooks and loops are used on the outside of a gar-

ment or where one portion of the dress fastens across another.



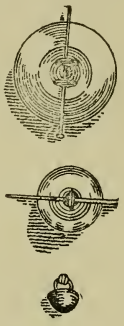
BUTTON HOLES.

Buttonholes:—In making buttonholes, always use buttonhole scissors to cut them. Overhand the edges closely, not taking in any deeper than necessary to hold the threads. In working a buttonhole, always begin at the end farthest from the edge of the material, working from the right towards the left. Insert the needle with the point towards you, drawing it but half way through. Take the two threads at the eye of the needle and bring them around from right to left, passing under the point of the needle. Draw the needle out so that the thread will be at right angles from the buttonhole, forming a knot, or purl, on the edge. In the first position the needle points towards the worker; in the second, it points in the opposite direction. When the buttonhole has been worked across one side, work several stitches close together, so that the buttonhole will be rounding at the end. Work across the other side and finish with a bar, which is made by drawing the needle down through the first buttonhole stitch taken, bringing it

up on the opposite side, through the last button hole stitch. Draw this stitch tightly, so as to bring the sides close together. Make four of these stitches. Then, bringing the needle under them, work four buttonhole stitches on them. Draw the needle down through the cloth close to the purl of the last stitch and fasten on the wrong side. In working a buttonhole, if the thread runs too short, pull the needle through the hole and fasten the thread tightly on the wrong side, close beside the last stitch. Fasten the new thread on the wrong side, bringing the needle up through the last purl. Proceed with the buttonhole stitch as if a new thread had not been necessary. Buttonholes for shirts and shirt waists, or any garment where the buttonhole is made lengthwise, should be worked with a bar at each end to make it stronger. In addition to overhanding buttonholes, very careful workers sometimes strand them; i. e., carry a thread of silk across each edge, over which the stitch is worked. This is done by bringing the needle up through the cloth close to one end of the hole; down through the material at the opposite end, coming up on the other side; repeating these stitches so that there will be two strands on each side. The buttonhole is then worked as described.

Buttons:—A button is a knob, or ball, fastened to a garment in such a way that it will go through a buttonhole or loop, and hold different parts of a garment together. They are made of horn, wood, mother of pearl, etc. In sewing on buttons, draw the needle through the

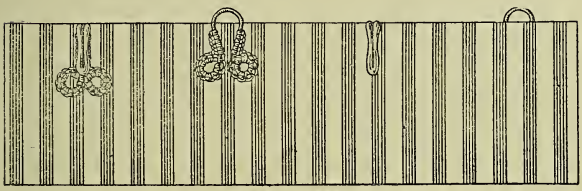
material from the upper side, to conceal the knot under the button. A large button should be sewed on a cloak, with a smaller one under it and on the wrong side of the garment, which will prevent the cloth from tearing. Each of these buttons should have the same



BUTTONS.

number of holes. The stitches should never be crossed, but sewed lengthwise (as illustrated.) Place a pin across the top of the button, then, after sewing it on securely, remove the pin, which will loosen the stitches. Then bring the needle out between the top button and the cloth, and wind the thread tightly around the stitches four times. This will allow room for the buttonhole. Fasten the thread by bringing the needle through to the wrong side and taking several stitches under the small button. In sewing on buttons for other garments, place a pin across the top, and after removing it bring the needle out between the button and the material. Wind the thread tightly around the stitches,

as in sewing on a cloak button. Bring the needle through to the wrong side, and fasten by taking several stitches over each other. A boot button, or any button with a shank, should be sewed on over and over, the stitches being lengthwise.

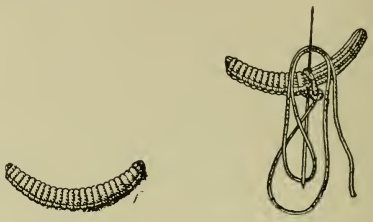


HOOKS AND EYES.

Hooks and Eyes:—There are different methods of sewing on hooks and eyes. For the outside of a garment they are buttonholed (as illustrated.) When they are to be covered, they are sewed on over and over. Always sew on the hooks firmly through the rings and across the shank close to the turn. Sew on the eyes through the rings and across each side of the body of the eye. Under the name of "crochet and loop" this form of fastening was in use as early as the fourteenth century.

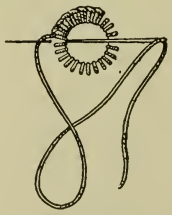
Loops:—A loop is a catch used on a garment to take the place of an eye. In making a loop take six stitches one-fourth of an inch in length, for a foundation, on which the "loop" stitch should be closely worked, the twist, or purl, being drawn to the outside edge of the loop. To fasten the thread, bring the needle down through the material close beside the last stitch, and

fasten on the wrong side with several stitches over each other. Loops are also often made with the buttonhole stitch.



LOOPS.

Eyelets:—An eyelet is a round hole made in the material with a stiletto. Overhand the hole closely with twist; the stitch being firmly drawn up to strengthen the edge of the hole and keep it well open and in shape.

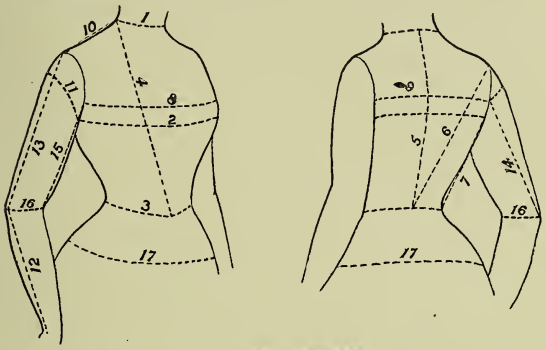


CUT "EYELETS"

Work the eyelet with the "loop" stitch from left to right. The thread should be fastened on the under side the same as in buttonhole making.

TAKING MEASURES.

Waist Measurement:—Waist measure should always be taken in the same manner, whether it be a nightgown, chemise, corset cover, shirt waist, jacket, or a fitted waist that is being drafted.



HOW TO TAKE MEASURES.

1 Neck, 2 Bust, 3 Waist, 4 Front, 5 Length of Back, 6 Back Balance, 7 Under Arm, 8 Chest, 9 Width of Back, 10 Shoulder, 11 Arm's Eye, 12 Shoulder to Hand, 13 Shoulder to Elbow, 14 Outside Arm's Eye to Elbow, 15 Inside Arm's Eye to Elbow, 16 Elbow, 17 Hip.

First tie a cord tightly around the waist, so as to find the correct waist line. The first measurement taken should be that of the neck, and it should be taken around the fullest part of the neck. When taking the bust measure, stand behind the person being measured, pass the tape line over the fullest part of the bust around under the arms to the center of the back.

The waist measure should be taken tightly around the waist line, previously located. The front measure is taken from the center of the back of the neck to the

waist line in front. The length of the back is found by measuring straight down from the back of the neck to the waist line. The back balance is another back measurement, and is taken from the shoulder to the waist line in the center of the back.

The under-arm measure is taken from well up under the arm straight down to the waist line. The chest measure is taken straight across the chest. The width of the back is determined by measuring straight across the widest part of the back. The shoulder measurement is taken from the neck to the shoulder point. Dart No. 1 is measured from the waist line to the fullest part of the bust. Dart No. 2 is measured from the waist line to a point one-half inch higher than the first dart.

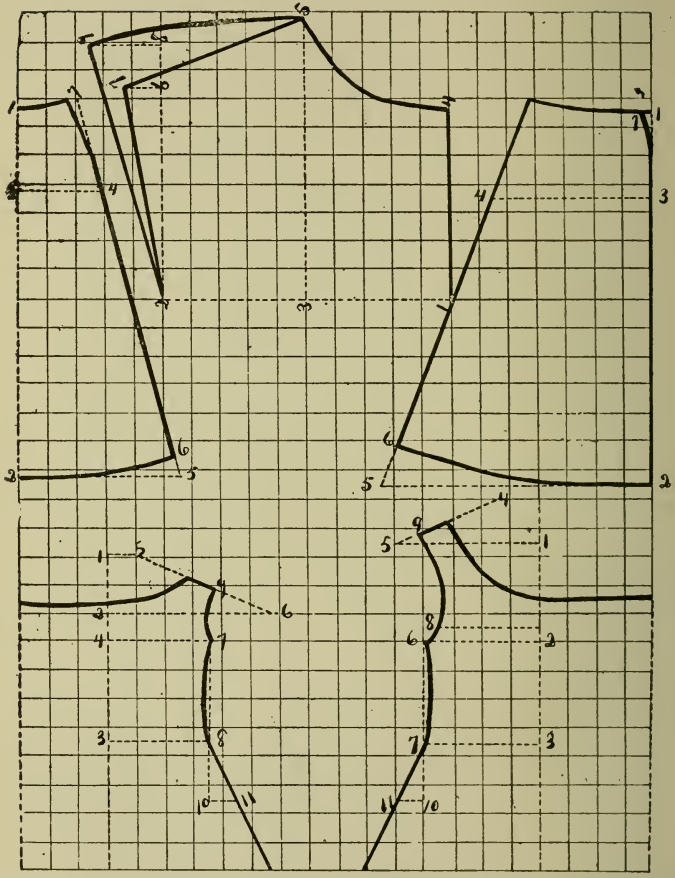
Sleeve Measurements:—The arm's eye measurement is found by measuring around the arm just below the shoulder bone. The outside length is found by measuring from the cap of the shoulder over the elbow to the hand. The elbow should be bent when taking this measurement.

To find the length from shoulder to elbow, measure from the shoulder cap to the most prominent point of the elbow when bent. The outside measurement from arm's eye to elbow is taken from the arm's eye to the most prominent point of the elbow when bent. The inside measurement is found by measuring from the hollow of the elbow to the arm's eye. Bend the elbow and measure around it to find the elbow measurement. The

hand measure is taken around the fullest part of the hand.

Shirt Waist and Nightgown Sleeves:—The outside shoulder to hand measurement is taken from the cap of the shoulder over the elbow to the hand. The elbow should be bent. The inside measurement is taken from the arm's eye to the hand, with the arm straight. The arm's eye and hand measurements are taken as for a tight sleeve.

In all the illustrations of drafting each square the sides of which measure three-sixteenths of an inch represents an inch.



DRAWERS, SKIRT AND CHEMISE.

DOLL'S GARMENTS.

DRAWERS.

Band .....13 inches
Length .....10 inches

To draft a pair of drawers for a doll two measurements are taken,—the band and the length. First measure up on a fold of paper the length from 1 to 2. From 1 to 3 is one-half of the length, and gives the seat-line.

From 1 measure out to 4 one-half the band measure for the width of the bottom of the leg. From 3 measure out to 5 three-fourths of the band measure for the width across the seat. From 2 measure out to 6 four-sevenths of the band to determine the width of the drawers across the front. From 6 measure up to 7 one and one-fourth inches, to give the required length of the front seam.

Connect 2 and 7 with a straight line for the top of the front, and 7 with 5 by a slightly inward curved line. From 6 measure out to 8 one and one-half inches, to give the required width of the back, and from 8 measure up to 9 one and one-fourth inches for the length of the seam in the back.

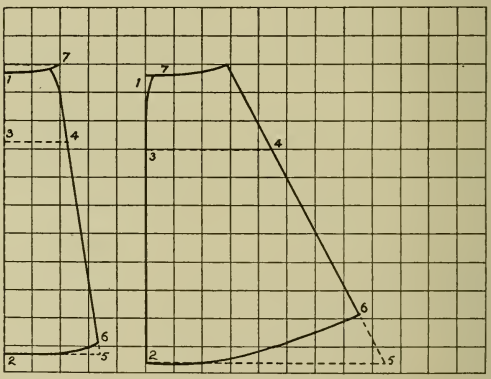
Connect 9 and 2 with a straight line for the top of the back, and 9 with 5 by a straight line for the seam in the back. Reduce the measurements 6 to 7 and 8 to 9 one-sixteenth of an inch for each inch decrease in the length of the doll. The drawers should be finished the same as are children's drawers, except that for a doll they should always have a straight band.

SKIRT.

To draft a skirt for a doll two measurements are required,—the length and the width around the hips.

TABLE OF MEASUREMENTS.

Hip.	Top of Front.	Bottom of Side Gore.	Top of Side Gore.	Bottom of Front.	Back.
12	2	3	4	8	12½
13	2⅛	3⅛	4⅛	8⅛	12⅝
13	2¼	3¼	4¼	8¼	12¾
15	2⅜	3⅜	4⅜	8⅜	12⅞
16	2½	3½	4½	8½	13
17	2⅝	3⅝	4⅝	8⅝	13⅛
18	2¾	3¾	4¾	8¾	13¼



The measurements taken for the doll's skirt illustrated were:—

Hip .....16 inches

Length .....13 inches

Front:—For the front, measure down to 1 one-fourth of an inch for the curve at the top, and from 1 to 2 the required length. From 1 measure down to the largest part of the hip or to 3 to find the hip line, and from 3 measure out to 4 the width of the front on hip line.

From 2 measure out to 5 the width of the bottom of the front breadth.

Draw a line from the top of the paper through 4 to 5, and mark off the length of skirt, 6, and for the bottom of the front draw a curved line from 2 to 6. At the top measure in one-fourth inch to 7, and draw an outward curved line to an inch and a half above 4. Draw a curved line from 7 to 1 for the top of the front breadth.

Side Gore:—For the side gore measure down to 1, one-half inch for the curve at the top. From 1 measure down to 2 the required length, and from 1 to 3, to find the hip line. From 3 measure out to 4 the width of the side gore on the hip line, and from 2 out to 5 the width of the bottom of the side gore.

Draw a line from the top of the paper through 4 to 5, and mark off the length of the skirt, 6. From 1 measure in one-fourth inch to 7, and draw an outward curve to the point one and one-half inches above 3. Draw a curved line from the top of the second seam to 7 for the top of the side gore, and connect 2 and 6 with an outward curved line for the bottom. The back breadth should be a straight piece.

The skirt should be cut and made according to the directions for an adult's underskirt. The measurement from 1 to 3 should be reduced one-fourth of an inch for each inch decrease in the length of the doll, or increased in the same proportion for a larger doll.

CHEMISE.

The measurements taken for the doll's chemise were:

Neck	7 inches
Bust	15 inches
Waist	13 inches
Chest	7 inches
Under arm	3½ inches
Length back	6½ inches
Width back	5 inches

Back:—To draft the back draw a horizontal line the length of paper and half an inch from the edge. From the top of paper measure down to 1 one-eighth inch for curve at neck. From 1 measure down two inches to 2 for slant of shoulder. To find the waist line measure down from 1 to 3 the length of back.

From 3 measure up to 4 the under-arm measurement to determine top of under-arm seam. From 1 measure out one inch to 5 for curve at back of neck. From 2 measure out six inches to 6 for slant of shoulder. From 4 measure out to 7 half width of back plus one inch to bring seam under the arm. From 3 measure out the same number of inches to 8.

Connect 5 and 6 with a dotted line, and mark length of shoulder 9. From 9 draw arm's eye curve to 7. Draw the under-arm seam from 7 to 8. To find the slant of skirt of chemise measure down two inches to 10 and out one inch to 11. Make skirt the desired length. Make the shoulder seam one inch wide, and draw neck

curve to the point half an inch above 2. From that point measure out the desired fullness.

Front:—To draft the front draw a horizontal line the length of paper one inch from the edge. From top of paper measure down one and one-half inches to 1 for slant of shoulder seam. From 1 measure down three and one-half inches to 2 to find the bust line. From 2 measure down to 3 the length of under-arm measurement to find the waist line.

From top of paper measure out one and one-half inches to 4 for curve at neck. From 1 measure out five inches to 5 for shoulder slant. To find the length of bust line in front, subtract the width of back from bust line, and for half of front divide the remainder by two. This amount less the one inch added to the back, measured out from 2 to 6 will give bust line. Measure out the same number of inches on waist line from 3 to 7.

One-half inch above 2 measure out one-half width of chest. Connect 4 and 5 with a dotted line and mark length of shoulder 9. Draw arm's eye curve from shoulder to bust line touching chest line. Draw under-arm seam from 6 to 7. To find the slant of skirt of doll's chemise, measure down from 7 to 10 two inches and out to 11 one inch. Make skirt the desired length. Make the shoulder seam one inch wide, and draw neck curve to the point one inch above chest line.

An allowance of one-sixteenth of an inch must be made for each inch difference in size of doll. Follow the directions given in adult's chemise for making.

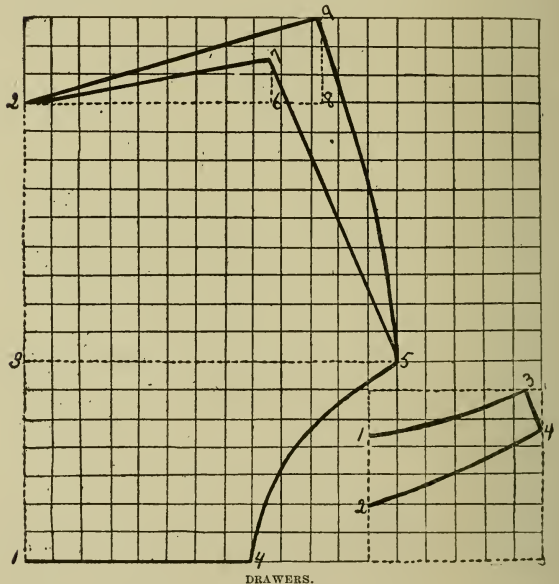
CHILDREN'S GARMENTS.

DRAWERS.

To draft the pattern illustrated two measurements were taken:—

Length .....16 inches

Band .....23 inches



DRAWERS.

The length is found by measuring from the waist line over the hip to the knee. The band measure is found by measuring around the smallest part of the waist. Measure up on a fold of paper the length from 1 to 2. To find the seat line, measure up from 1, one-half the

length, less one inch, to 3. From 1 measure out to 4 one-half the length for the width of the leg. To find the width of the seat measure out from 3 to 5, three-fourths the length plus one inch. To find the width of the front measure out from 2 to 6 one-third the band measure, plus one inch, and for the slant of the top of front mark up one and one-half inches to 7, and connect 2 and 7. Draw a straight line from 7 to 5 for the front seam.

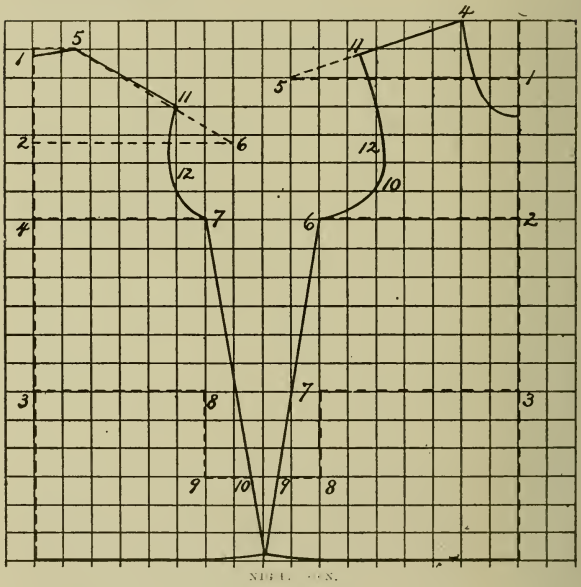
Since the back is wider than the front, measure out from 6 to 8 one and one-half inches, and for the slant of the top of back measure from 8 to 9 three inches. Connect 2 and 9 with a straight line for the top of the back, and 9 and 5 with a slightly outward curved line for the seam in the back. Connect 5 and 4 with an inward curved line for the seam in the leg.

The drawers as drafted are the length they should be when finished. Open the pattern and fold back the bottom the width of the trimming. Then pin it to the material, placing the bottom straight with the woof threads. Cut the second leg by the first, with the right sides of the material together. Make the drawers with felled seams, hemming the opening on each side and finishing them with gussets. Use a straight band. If a curved band is preferred, draft it as follows:

Band:—Make a square one-fourth inch larger than one-fourth the band measure. From the top measure down to 1 one and one-half inches for the curve in front; and from 1 to 2, two and one-half inches for the width

of band in front. From 1 measure up to 3 one-quarter of the band measure, and from 3 to 4 one and one-half inches for the width of band on the side.

Connect 1 and 3 and 2 and 4 with slightly inward curved lines. Connect 1 and 2 and 3 and 4. Cut on a fold. When this band is used cut the top of front of drawers off on the line from 2 to 6. Use a straight band in the back.



NIGHTGOWN.

The measurements taken for the child's gown illustrated were:—

Neck ..... 11 inches

Bust ..... 25 inches

Back	$11\frac{3}{4}$ inches
Under arm	6 inches
Shoulder	4 inches
Chest	10 inches
Width back	$9\frac{1}{2}$ inches

Back:—In drafting the back first draw a horizontal line the length of the paper and one inch from the edge. From the top of paper measure down on the line one-fourth inch to 1 for the curve at the neck.

From 1 always measure down three inches to 2 for shoulder slant, and from 1 to 3 length of back to find waist line. From 3 measure up to 4 the length of under-arm measurement to determine top of under-arm seam.

From 1 measure out on top of paper to 5 one and one-half inches for a twelve-inch neck, adding or deducting one-eighth inch for each inch more or less in the neck measurement. From 2 always measure out seven inches to 6 to find correct slant of shoulder seam. From 4 measure out to 7 half the width of back plus one and one-fourth inches to bring seam under the arm and from 3 measure out the same number of inches on the waist line to 8. To find the slant of the under-arm seam measure down from 8 three inches to 9, and out one and one-half inches to 10.

Draw the curve for the neck from 5 to 1. Connect 5 and 6 with a dotted line and mark the length of shoulder, curving the shoulder seam to 11 one-fourth inch above the dotted line. 12 is the arm's-eye curve drawn from

11 to 7. From 7 draw the under-arm seam through 10 to the required length of the gown. Draw a line for the back yoke one inch below 2. Allow fullness in the back from the same point, if for a yoke.

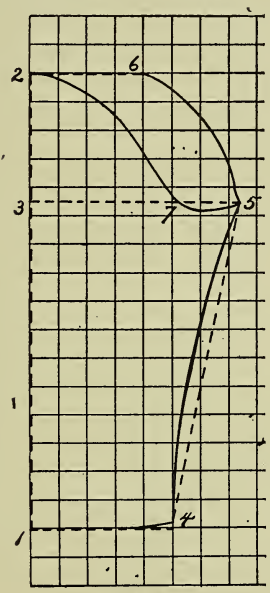
Front:—For the front first draw a horizontal line the length of the paper and two inches from the edge. From the top of paper measure down on line to 1 two inches for shoulder slant. From 1 always measure down five inches to 2 to determine top of under-arm seam, and from 2 to 3 the length of under-arm measurement to find waist line.

From top of line measure out to 4 two inches for a twelve-inch neck, adding or deducting one-eighth inch for each inch more or less in the neck measurement. From 1 always measure out eight inches to 5 for correct slant of shoulder seam.

To find the width of front on bust line subtract the width of back from bust measure, and for half the front divide the remainder by two. This amount, less the one and one-fourth inches added to the back, is the length of the line from 2 to 6. Measure out the same number of inches on the waist line from 3 to 7. To find the slant of the under-arm seam measure down from 7 three inches to 8, and out one and one-half inches to 9. One inch above 2 measure out to 10 half the chest measurement.

Connect 4 and 5 with a dotted line and mark the length of shoulder seam 11. 12 is the arm's-eye curve drawn from the shoulder to bust line, touching chest line. Draw the under-arm seam from 6 through 9 to

the required length of the gown. Any style gown may be cut from this pattern, fullness being allowed either for yoke or from the neck. Follow directions given in adult's gown for cutting and making.



SLEEVE.

SLEEVE.

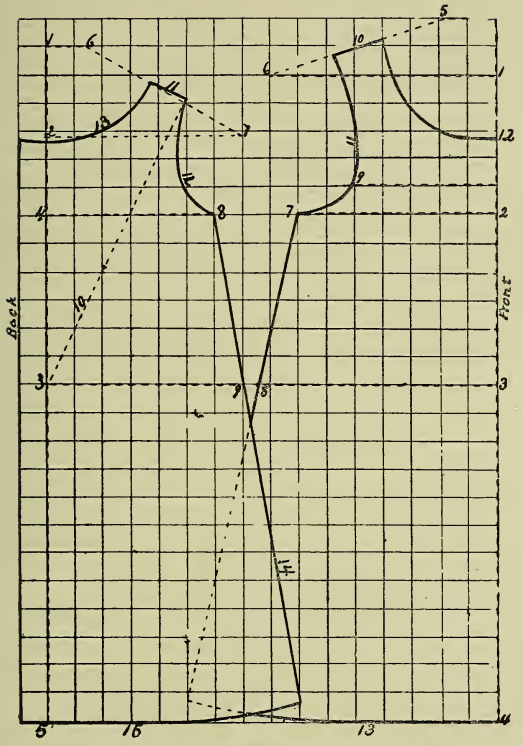
The measurements taken for this sleeve were:

Outside shoulder to hand	16	inches
Inside arm's eye to hand	11½	inches
Arm's eye	11	inches
Hand	6	inches

Draft this sleeve with the fold of paper towards you. From 1 measure up on the fold to 2 the outside length of sleeve, and from 1 to 3 the inside measurement. From 1 measure out to 4 half the hand measure plus two inches. From 3 measure out to 5 half the arm's eye, plus two inches. From 2 measure out to 6 half the arm's eye, less one and one-half inches, and from that point draw an outward curve to 5 for the top of upper side of sleeve.

For the curve under the arm measure in from 5 to 7 one-fourth the arm's eye, and draw an outward curved line from 2 through 7 to 5, extending it one-fourth inch below the arm's-eye line. Connect 5 and 4 with a dotted line. Mark the length of inside measurement, and draw a slightly curved line for the seam. For the bottom of sleeve connect 1 and 4 with a slightly curved line.

Cut the pattern through both thicknesses of paper, cutting the upper portion first; then, opening the pattern, cut on the line from 2 through 7 to 5. Allow for seams. Open the pattern and pin it to the material, so that the warp will run straight with length of sleeve. The sleeve may be made and finished the same as the adult's nightgown sleeve.



APRON.

APRON.

The measurements taken for the apron illustrated were:

Neck	11 inches
Bust	26 inches
Length of back	$11\frac{3}{4}$ inches

Back balance .....10¼ inches
Under arm ..... 6 inches
Shoulder ..... 4 inches
Chest ....10 inches
Width of back ..... 9½ inches

Back:—For drafting the back, draw a horizontal line the length of the paper. From 1 measure down to 2 three and one-fourth inches for the slant of the shoulder seam. Measure down from 1 to 3 the length of the back to find the waist line. From 3 measure up to 4 the under-arm measurement which is the top of the under-arm seam. From 3 measure to 5 the required length from the waist line to the bottom of the apron.

From 1 measure out to 6 one and one-half inches for a 12-inch neck, adding one-eighth of an inch for each additional inch, or deducting the same amount for each inch less in the neck measurement. From 2 always measure out seven inches to 7 for the correct shoulder slant. From 4 measure out to 8 one-half the width of the back plus one and one-fourth inches to bring the seam under the arm; and from 3 measure out on the waist line to 9 the same number of inches, plus one inch for the correct slant of the under-arm seam.

Connect 6 and 1 with dotted lines, marking the length of the shoulder. Draw 10, the back balance, from 3 through that point, and make the shoulder seam, 11, one and one-half inches wide. 12 is the arm's-eye curve; 13 the neck curve; 14 the under-arm seam; and 15 the slightly curved line drawn for the bottom of the apron.

Front:—For the front draw a horizontal line the length of the paper and two inches from the edge. From the top of the line measure down to 1 two inches for the slant of the shoulder seam.

From 1 to 2 should be five inches for a child and determines the top of the under-arm seam. Measure from 2 to 3 the length of the under-arm measurement to find the waist line. From 3 measure to 4 the required length from the waist line to the bottom of the apron.

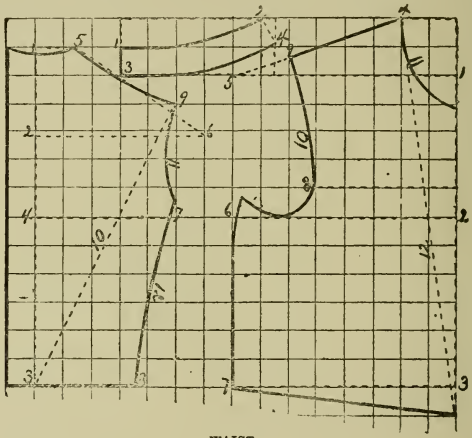
From the top of the line measure out to 5 two inches for a 12-inch neck, adding or deducting one-eighth of an inch for each inch more or less in the neck measurement. From 1 to 6 is always eight inches, which gives the correct shoulder slant for a child.

From 2 to 7 is the bust line, which is determined by subtracting the width of the back from the bust measurement, and, since we are drafting but one-half of the front, divide the remainder by two. From this amount deduct the one and one-fourth inches which was added to the back. From 3 measure out the same number of inches to 8, plus one and one-half inches for the slant of the under-arm seam.

One inch above the bust line measure out to 9 one-half the chest measurement. Connect 5 and 6 with a dotted line, marking off the length of the shoulder and making the shoulder seam one and one-half inches wide, 10. 11 is the arm's-eye curve drawn from the shoulder to the bust line touching the chest line. 12 is the neck curve drawn from the shoulder to the point two and

one-fourth inches below 1. Draw the under-arm seam and the line for the bottom of the apron, 13.

Cut the front of a fold of the material, allowing fullness at the neck if desired. Allow the hems on the back, and finish with French seams. A high neck and long-sleeved apron can be made from this pattern by drafting it to the neck and using the nightgown sleeve.



WAIST.

WAIST.

The measurements taken for the waist illustrated were:

Neck	11	inches
Bust	25	inches
Waist	23	inches
Front	14	inches
Back	$11\frac{3}{4}$	inches

Back balance	$10\frac{1}{4}$ inches
Under arm	6 inches
Shoulder	4 inches
Chest	10 inches
Width of back	$9\frac{1}{2}$ inches

Back:—In drafting the back of a child's waist, first draw a horizontal line the length of the paper and one inch from the edge. From the top of the line measure down one-fourth of an inch to 1 for the curve at the neck. From 1 measure down three inches to 2 for the slant of the shoulder. To find the waist line measure down from 1 to 3 the length of the back. From 3 measure up to 4 the length of the under-arm measurement.

From 1 measure out one and one-half inches for a twelve-inch neck, adding or deducting one-eighth of an inch for each inch more or less in the neck measurement. From 2 measure out six inches to 6 for slant of the shoulder. From 4 to 7 measure out half of the width of back, and from 3 to 8 the width of back on the waist line, allowing one-eighth of an inch for each additional inch in the waist measure.

Connect 5 and 6 with a dotted line, and mark the length of the shoulder. 10 is the back balance taken from the center of the back on the waist line to the shoulder point, and determines the location of the shoulder seam. 11 is the arm's-eye curve. 12 is the under-arm seam drawn from 7 to 8.

Front:—For the front draw a horizontal line the length of the paper and two inches from the edge.

From the top of the paper mark down on the line two inches to 1 for the slant of the shoulder. From 1 always measure down five inches to 2 to find the bust line. From 2 measure to 3 the length of the underarm measurement to find the waist line.

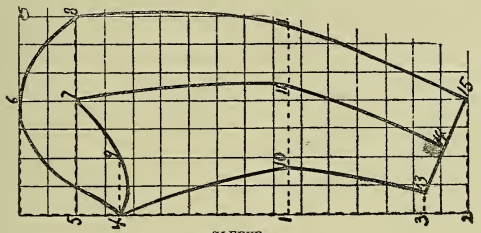
From the top of the main line measure out to 4 two inches for a twelve-inch neck, adding or deducting one-eighth inch for each inch more or less in the neck measurement. From 1 measure out eight inches to 5 for the slant of the shoulder.

To find the width of the bust line from 2 to 6, subtract the width of the back from the bust measure and divide the remainder by two for half the front. To find the width of the front on the waist line, subtract the width of back on the waist line from the waist measurement and for half the front divide the remainder by two, and the amount remaining is the measure from 3 to 7. One inch above the bust line measure out one-half the chest measurement, 8.

Connect 4 and 5 with a dotted line, and mark the length of the shoulder, 9. 10 is the arm's-eye curve, and is drawn from the shoulder to the bust line, touching the chest line. 11 is the neck curve drawn from 4 to one and one-half inches below 1, if for a 12-inch neck. Allow or deduct one-eighth of an inch for each inch more or less in the neck measurement.

To find the permanent waist line subtract from the front measurement the number of inches marked off from 1 to 5 on the back of the neck. Measure the re-

maining number of inches from 4 to the main line, 12, in front, and draw the waist line. From 6 measure up three-fourths of an inch and in one-fourth of an inch, and connect that point with 7 for under-arm seam.



SLEEVE.

Sleeve:—The measurements taken for the child's sleeve were:

From shoulder to elbow.....	9½ inches
From elbow to wrist.....	6½ inches
Inside from arm's eye to elbow.....	6 inches
Arm's eye	11 inches
Elbow	8 inches
Hand	6½ inches

First measure down from the top of paper the measurement from shoulder to elbow to 1 to find the elbow line. From 1 to 2 measure the length from elbow to wrist, and from 2 to 3 always mark off one and one-half inches for the slant at wrist. From 1 to 4 mark the inside measure from elbow to arm's eye, and from 4 to 5 always mark one and one-half inches for the curve of the under portion of sleeve.

From top of the line measure out four inches to 6. From 5 measure out one-half of arm's eye less one and

one-half inches to 7 for the under portion, and from 5 to 8 one and one-half inches more than half the arm's eye for the upper portion of sleeve. From 4 measure off to 9 one-half the distance from 5 to 7.

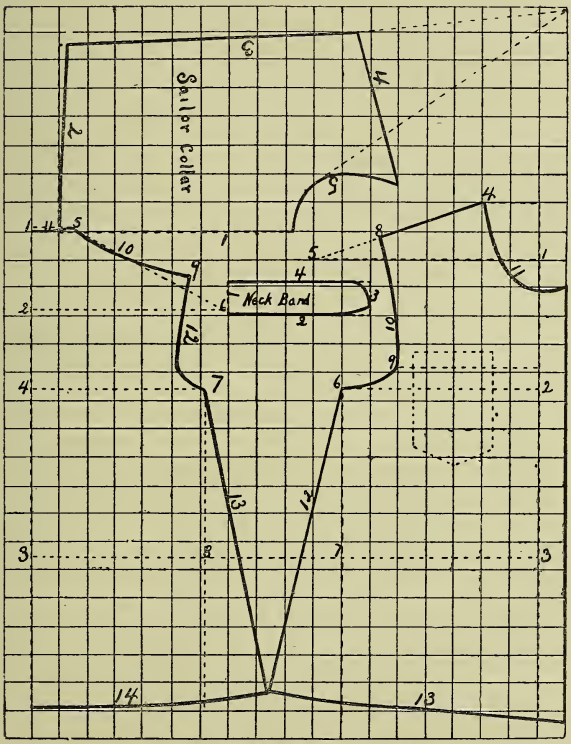
From 1 always measure out one and one-half inches for inside curve of elbow. From 10 measure out to 11 one-half the elbow measure, less one inch for the width of the under portion at the elbow; and from 10 to 12 measure out one-half the elbow measure, plus one inch, for the width of the upper. From 3 to 13 mark off one-half inch and then from 13 to 14 one-half the hand measure, less one inch for the width of the under portion at the wrist. From 13 to 15 measure out one-half the hand measurement, plus one inch for the width of the upper portion.

Draw an outward curved line from 4 through 10 to 13 for the inside seam. For the outside seam of the under part of sleeve draw an outward curved line from 7 through 11 to 14, and for the outside seam of the upper portion draw an outward curved line from 8 through 12 to 15. Draw a curved line from 4 through 6 to 8 for the top of upper part of sleeve, and another one from 4 to 7 for the curve under the arm.

Collar:—For the collar mark down one inch to 1, and out from top of line one-half of neck measure. Then mark in one-half inch to 2. From 1 measure down one inch to 3.

At the end of top line measure down one inch and connect 1 and 2 with an inward curved line for the top

of the collar. Connect 2 and 4 with a straight line for the center of front, and draw an outward curved line from 3 to 4 for the bottom of the collar.



BOY'S SAILOR WAIST AND COLLAR.

BOY'S SAILOR WAIST AND COLLAR.

The measurements taken for this waist were:

Neck .....11 inches

Bust	25	inches
Back	$11\frac{3}{4}$	inches
Under arm	6	inches
Shoulder	4	inches
Chest	10	inches
Width back	$9\frac{1}{2}$	inches

Back:—For the back draw a horizontal line the length of the paper and one inch from the edge. From the top measure down one-fourth inch to 1 for the curve at the neck. From 1 always measure down three inches to 2 for slant of shoulder. From 1 measure down to 3 the length of back to find the waist line. From 3 measure up to 4 the under-arm measurement, to determine the top of under-arm seam.

From 1 measure out to 5 one and one-half inches for a twelve-inch neck, adding or deducting one-eighth inch for each inch more or less in the neck measurement. From 2 always measure out seven inches to 6 to get the shoulder slant. From 4 measure out half the width of back, plus one and one-half inches, to bring the seam under the arm. Measure out the same number of inches from 3 to 8, plus one and one-fourth inches, for the slant of under-arm seam.

Connect 5 and 6 with a dotted line, and mark the length of shoulder, 9, coming up one-half inch from shoulder slant, and draw shoulder seam, 10. 11 is the curve at the neck. 12 is the arm's-eye curve. 13 is the under-arm seam, extending from 7 to bottom of waist and slanting two and one-fourth inches. 14 is the

curve at the bottom, which is five inches below the waist line.

Front:—For the front draw a horizontal line the length of the paper and two inches from the edge. Measure down two inches from top of line to 1 for slant of shoulder. From 1 measure down four and one-half inches to 2 for the bust line. To find the waist line, measure down from 2 to 3 the length of the under-arm measurement.

From the top of line measure out two inches to 4 for a twelve-inch neck, allowing or deducting one-eighth inch for each inch more or less in the neck measurement. Measure out eight inches from 1 to 5 for the correct shoulder slant.

To find the width of the front on the bust line subtract the width of back from bust measurement and divide the remainder by two for half the front. From this amount subtract the one and one-half inches added to the back, and measure out the remainder from 2 to 6. Measure out the same number of inches from 3 to 7, plus one and one-half inches for slant of under-arm seam.

Connect 4 and 5 with a dotted line, and mark off the length of shoulder seam to 8. One inch above the bust line measure out to 9 one-half the width of chest. 10 is the arm's-eye curve drawn from the shoulder to the bust line touching the chest line. 11 is the neck curve drawn from 4 to the point one and one-half inches below 1 for a twelve-inch neck, with a difference of one-eighth inch

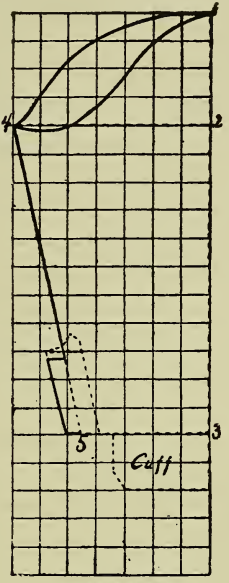
for each varying inch in the neck measurement. 12 is the under-arm seam extending from 6 to the bottom of the waist and slanting two and one-half inches. 13 is the slightly curved line at bottom of waist.

Band:—For the neck band mark off one-half of neck measure, and make it one and one-fourth inches in width. The dotted line, 1, is the center of back. 2 is the edge of band, which is sewed on the neck of the waist, and is slightly curved in front. 3 is the curved edge in front. And 4 is the top, which is straight. Cut the band lengthwise of the material.

Collar:—For the sailor collar mark off on fold of paper eight and one-fourth inches, which is the dotted line, 1, and marks the center of the back. 2 is the bottom of collar in the back, and is slightly curved. 3 is a straight line slanting one-half inch, and is the side of collar. 4 is the edge in front, slanting one and one-half inches. 5 is the neck curve.

This collar may be made to come to a point in front by following the dotted lines. The blouse as drafted fits a child of seven. For a younger child it should be wider at the bottom, and longer.

Blouse Sleeve:—The following measurements were taken for the boy's blouse sleeve illustrated:



BLOUSE SLEEVE.

Length shoulder to hand.....15 inches
Inside arm's eye to hand.....11 inches
Arm's eye .....10 inches
Hand ..... 6 inches

To draft the sleeve for a boy's blouse measure on a fold of paper from 1 to 3 the length of the sleeve from shoulder to hand, and from 3 measure to 2 the inside length. From 2 measure out to 4 half the arm's eye measurement, plus two inches, for the width of the

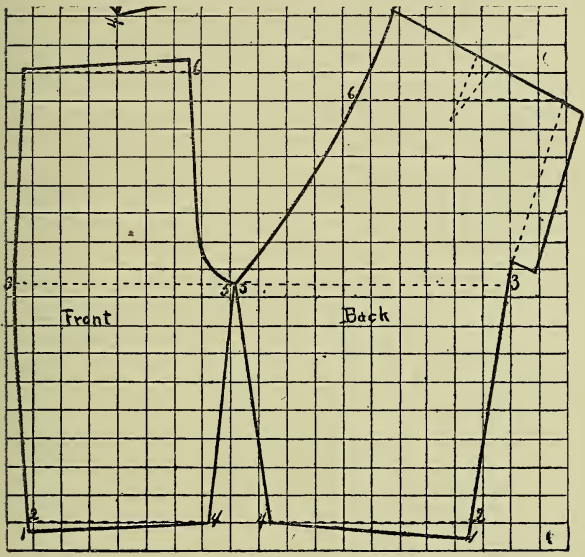
sleeve. From 3 measure out to 5 one-half the hand measurement plus one and one-half inches. Draw an outward curve from 1 to 4 for the upper portion of the sleeve.

For the under portion draw another curved line from 1 to 4, extending a portion of it one-fourth inch below the line 2 to 4, for the curve under the arm. Connect 4 and 5 with a dotted line marking off the inside length of the sleeve, and draw from 3 the line indicating the bottom of the sleeve.

Dotted lines show the size and shape of the cuff. The extra width of the sleeve is gathered into the band or cuff. The extension and finish for the opening in the sleeve are also illustrated. Make the sleeve with a French seam. Gather the sleeve across the top and place it in the garment so that the most fullness will come just in front of the shoulder seam, the remainder being evenly distributed over the top of sleeve.

BOY'S PANTS.

The following measurements were taken for the boy's pants illustrated:



BOY'S PANTS.

Waist	24 inches
Width of seat	17 inches
Knee	13½ inches
Outside length	16½ inches
Inside length	8½ inches

Front:—To draft the front of boy's pants draw a horizontal line the length of the paper and one inch from the edge. From the edge of the paper measure

L. of C.

up three-fourths of an inch, to determine the bottom of the pants and from that point measure up on the line the outside length.

For the curve of the side seam at the bottom measure in to 1 one-half inch, and for the curve at the top measure in three-eights of an inch. For the slant at the bottom of leg measure from 1 to 2 one-fourth inch. To find the seat line measure up from 2 to 3 the length of the inside measurement. From 2 measure out to 4 one-half the knee measurement less one-half inch, for the width of leg at the bottom.

To find the width of the front of pants on the seat line measure out from 3 to 5 one-half of width of seat measurement less three-fourths of an inch. To find the width of top measure out to 6 one-fourth of waist measurement less one inch.

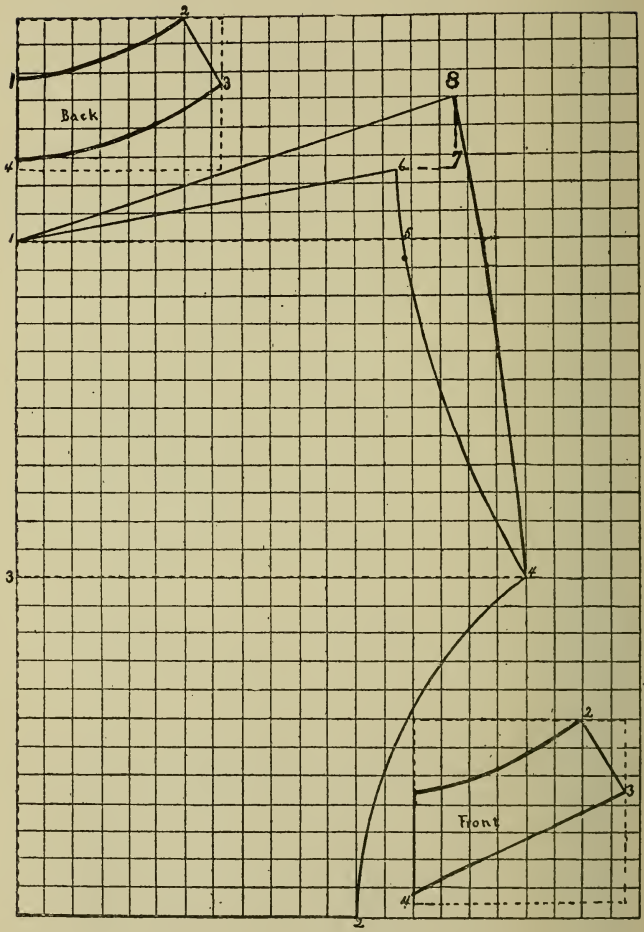
Draw a curved line from the top of the pants through 3 to 1 for the side seam. Connect 1 and 4 for the bottom of the pants. From the top of the side seam draw a line to the point one-half inch above 6. From this point draw a line to 5, curving it sharply at the seat. Connect 5 and 4 with a slightly curved line for the inside seam.

Back:—To draft the back of the pants draw a horizontal line the length of the paper and one inch from the edge. From the edge of the paper measure up one-half inch to determine the bottom of the pants; and from this point for the slant of the side seam measure in to 1 three and one-half inches. For the slant of the bottom of leg measure from 1 to 2 one-half inch.

To find the seat line measure up from 2 the inside measurement slanting the line one and three-eighths inches to 3. From 2 measure out to 4 one-half the knee measurement, plus one inch, for the width of the leg at the bottom.

To find the width of back of pants on the seat line measure out from 3 to 5 one-half of width of seat plus one and one-half inches. Measure up the outside length, from 1 through 3 to the main line, and from this point measure out to 6 one-fourth the band measure plus two inches for the width of the top. From 6 measure up three inches, slanting one and one-fourth inches to 7. For the side seam draw a slightly curved line from 1 through 3 to the main line, allowing for flap as indicated. Connect 1 and 4 for the bottom of the pants. Connect the top of side seam and 7 with a straight line, and from 7 draw a curved line through 6 to 5. Connect 5 and 4 with a slightly curved line for the inside seam.

Cut the pattern allowing for seams. Fit the back of the pants with a dart in the center of each side. Sew up the side seams, stitching them flat on the right side. Sew the inside seams of each leg, then joining the inside seams at the seat line, baste and stitch the front and back seams. Press and stitch on the right side. Face or hem the bottom and finish the placket with a facing. Sew a band on the inside for the buttonholes, to fasten to waist.



DRAWERS.

ADULT'S GARMENTS.

DRAWERS.

Two measurements are required for drafting drawers. Those in the illustration are:

Band .....24 inches
Length .....24 inches

The band measurement is taken around the waist. The length is measured from the waist over the hip to the bend of the knee. On the fold of the paper measure up to 1 the length of the drawers.

To find the seat line measure up on the fold to 3 one-half the length. Measure out to 2 one-half the band measurement to find the width of the bottom of the drawers. From 3 measure out to 4 three-fourths of the length for the width of the seat. For the width of the front of the drawers measure out from 1 to 5 four-sevenths of the band measure.

To secure a good fit the drawers should be longer on the seams than on the hips. Extend the front seam two and one-half inches above 5 to 6. Connect the top of the front, 6, with the hip, 1, and for the front seam draw a slightly inward curved line from 6 to 4.

Since more fullness is required in the back than in the front measure out from 6 to 7 two inches. The back seam should be longer than the front. Therefore, measure up from 7 to 8 two and one-half inches. Connect this point, 8, with the hip, 1, and for the back seam draw a slightly outward curved line to 4. For the seam in the leg, draw an inward curve from 4 to 2.

Cut the pattern through both thicknesses of paper by the outside pencil marks. Then, unfolding the paper, cut the front on the lines drawn for the front.

Band:—When drafting the band take a measurement one inch larger than the band measure, and to this amount add six inches and, since we are drafting but one-fourth of the band at a time, divide this number by four, and we have left the size of the square in which to draft the band.

In drafting the front, measure down two and one-half inches to 1. For the middle of the front, measure down from 1 to 4 three and one-half inches. For the slant of the seam on the hips measure in from the edge of the square one and one-half inches to 2 and for the width of the band on the hips measure down from the edge of the square two and one-half inches to 3. Connect 1 and 2 and 3 and 4 by lines slightly curving towards the center. Connect 2 and 3 with a straight line for the hip seam.

In drafting the back measure down from the edge of the square two to 1, and from 1 measure down three inches to 4 for the middle of the back band. For the slant of the seam on the hips measure in from the edge of the square one and one-half inches to 2; and for the width of the band measure down from the edge of the square two and one-half inches to 3. Connect 1 and 2 by an inward curved line, and 4 and 3 by an outward curve. Connect 2 and 3 with a straight line for the

hip seam. Cut the middle of the front and the middle of the back band on a fold of the material.

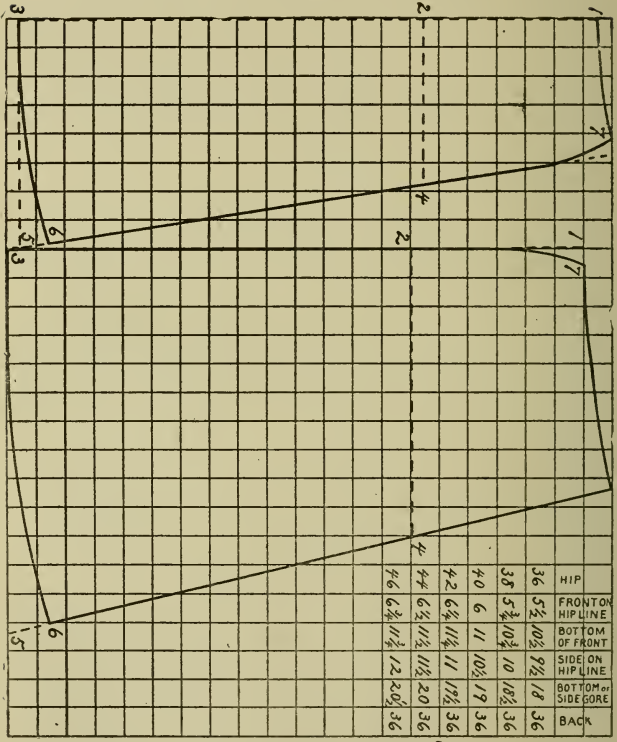
The drawers as drafted are the length they should be when finished. Therefore, when cutting them out open the pattern and fold back the bottom the same width as the trimming to be used. Care should be taken when pinning the pattern to the material to have the bottom straight with the woof threads of the cloth. Cut the second leg by placing the one already cut on the material, with the right sides together.

Make the drawers with felled seams. Hem the plackets, and finish them with gussets. To make a pair of drawers, two yards of muslin are required, if other material is used for trimming. If trimmed with itself two and one-half yards are needed. If trimming four or more inches wide is used, allow once and a half the width of the bottom for each leg. Narrower embroidery requires less fullness.

Umbrella drawers can be made from this pattern by drawing a curved line from three and one-half inches below 3 to four and one-half inches above 2, and cutting on that line for the bottom of the leg.

UNDERSKIRT.

To draft an underskirt four measurements are necessary: The hip measure, which is taken around the hips six inches below the waist. The length is taken



UNDERSKIRT.

three times,—down the front, over the hips, and down the back; each measurement being taken from the waist line to the bottom of the skirt.

Front:—To draft the front of skirt, measure down on the edge of the paper one-half of an inch to 1 for the curve at the top of the front. From 1 always measure down six inches to 2 to find the hip line. From 1 measure down to 3 the length of the skirt in front. From 2 measure out to 4 the width of the front on the hip line, as illustrated in table of measurement, in which case the hip measure is thirty-eight inches. From 3 measure out to 5 the width of the bottom of the front breadth.

Draw a line from the top of the paper through 4 to 5, measuring the length of the skirt, 6, and for the bottom of the front draw a curved line from 3 to 6. On the top of the paper measure in one-half inch to 7 and draw an outward curved line to within three inches of 4. Draw a curved line from 7 to 1 for the top of the front gore.

Side Gore:—For the side gore measure down on the edge of the paper one inch to 1 for the curve at the top of the gore. From 1 always measure down six inches to 2 for the hip line. From 1 measure down to 3 the length of the skirt, making it correspond with the length of the seam of the front. From 2 measure out to 4 the width of the side gore on the hip line. From 3 measure out to 5 the width of the bottom of the side.

Draw a line from the top of the paper through 4 to 5, measuring the length of the skirt in the back at 6. From the edge of the paper measure in one-half inch to 7 and draw an outward curve to the line three inches

above 2. From the top of the second seam draw a curved line to 7 for the top of the side gore. From the top of the side gore measure down through the center the length of the skirt over the hips, and for the bottom of the gore draw a line from 3 to 6.

Back:—The back of the skirt is a straight length, thirty-six inches wide. When cutting the skirt, the front should be cut first, cutting it on a fold of the material, and allowing for seams.

Baste the skirt together, try it on, and fit it at the waist line by taking up darts in the front and on the hips, the only fullness being in the back, the back breadth only being gathered. Overcast the edges of the seams together.

The skirt may be finished at the bottom with a three inch dust ruffle and a deep flounce, which should be put on with a tuck. Colored skirts can be made with two medium width corded ruffles. From four to six yards of muslin is required to make a skirt.

YOKE FOR UNDERSKIRT.

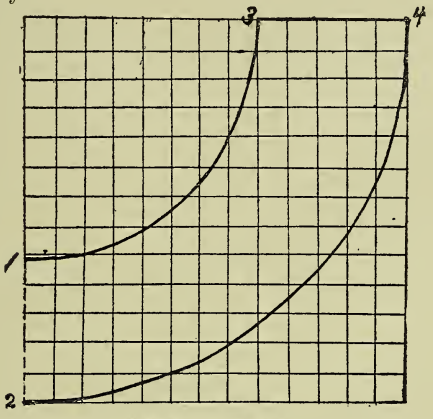
Yoke for Underskirt:—The measurement taken for the yoke illustrated was waist twenty-four inches, width five inches.

To draft the yoke make a square one-third of the band measurement plus the required width of the yoke.

From the top measure down to 1 one-third of the band measurement for the curve of the front of yoke.

From 1 measure down to 2 the width of yoke.

To find the curve for the back of the yoke, measure out from the top of the square to 3 one-third of the band measurement, and from 3 to 4 measure the width of the yoke.

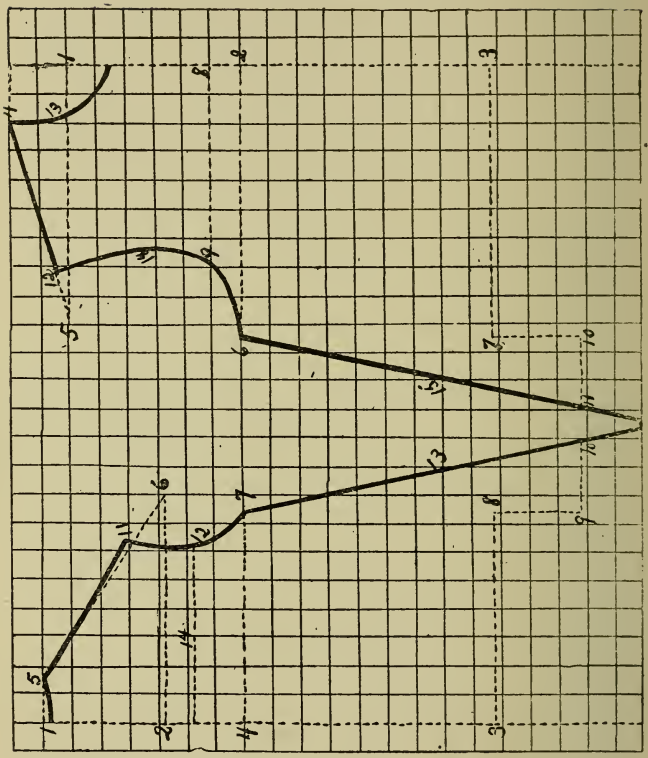


YOKE FOR UNDERSKIRT.

For the top of the yoke draw a curved line from 1 to 3 and for the bottom draw another from 2 to 4.

The dotted line 1 to 2 is the middle of the front and should be cut on a fold of the material.

NIGHTGOWN.



NIGHTGOWN.

The measurements taken for the nightgown were

Neck	12	inches
Bust	34	inches
Length of back	16	inches

Under arm ..... $8\frac{3}{4}$ inches
Chest ..... 13 inches
Width of back..... $11\frac{1}{2}$ inches
Shoulder ..... $5\frac{1}{2}$ inches

Back:—To draft the back of the nightgown first draw a horizontal line the length of the paper and one inch from the edge. For the curve at the neck, always mark down one-fourth of an inch from the edge of the paper to 1. From 1 always measure down four inches on the main line to 2 for the slant of the shoulder. To find the waist line measure down from 1 to 3 the length of the back. From the waist line, 3, measure up to 4, the under-arm measurement, to find where the curve under the arm should be.

From 1 measure out to 5 one and one-half inches for a 12-inch neck, adding one-eighth of an inch for each additional inch, and subtracting the same amount for each inch less in the neck measurement. Thus, for a thirteen-inch neck, measure out one and five-eighths inches, and for an eleven-inch neck, measure out one and three-eighths inches. Draw a curve from 5 to 1.

To find the correct slant of the shoulder, always measure out from 2 to 6 eight inches. The width of the back is found by measuring out from 4 to 7 half of the width of the back measurement, plus one and three-fourths inches, which, taken from the front and added to the back, will bring the seam directly under the arm. At the waist line, 3, measure out to 8 the same number of inches as from 4 to 7.

From 8 measure down three inches to 9, then out two and one-half inches to 10, to give the right slant to the under-arm seam. Connect 5 and 6, marking the length of the shoulder. Measure up one-half inch from the dotted line to 11, and connect 5 and 11 with a slightly inward curved line. 12 is an inward curve at the arm's eye drawn from 11 to 7. 13 is the under-arm seam drawn from 7 through 10 slanting to the bottom of the gown. 14 is the lower edge of the back yoke, and is drawn one inch below 2.

Front:—In drafting the front of the nightgown, first draw a horizontal line the length of the paper and two inches from the edge. On this line always measure down to 1 two inches for the shoulder slant. From 1 always measure down six inches to 2, to find the bust line. From 2 measure down to 3 the length of the under-arm measurement, to find the waist line.

From the top of the main line measure out on the edge of the paper to 4 two inches for a twelve-inch neck, adding one-eighth of an inch for each additional inch, and deducting the same amount for each inch less in the neck measurement. From 1 to 5 always measure out nine inches to give the correct slant of the shoulder seam.

To find the length of the bust line from 2 to 6, subtract the width of the back from the bust measure, which in the measurements used in the illustration leaves twenty-two and one-half inches. Since we are drafting but half of the front, we have eleven and one-fourth

inches, less the one and three-fourths inches added to the width of the back, or nine and one-half inches as the width of the front, from 2 to 6. From 3 measure out on the waist to 7 the same number of inches as the bust line.

The chest line, 8 to 9, is measured out one inch above the bust line and is one-half the width of the chest. From 7 measure down three inches to 10, and out from that point two and one-half inches to 11, to find the correct slant of the under-arm seam. Connect 4 and 5 with a dotted line, marking the length of the shoulder 12.

From 4 draw an inward curve, 13, to one and one-half inches below 1 for a twelve-inch neck. This measurement also varies one-eighth of an inch for each inch over or under a twelve-inch neck measure. 14 is the inward curve at the arm's eye, drawn from the shoulder to the bust line, touching the chest line. 15 is the under-arm seam, slanting from 6 through 11 to the bottom of the gown.

Cut out the pattern, allowing for seams. Pin the back on a fold of the cloth, allowing between the fold and the pattern as much fullness as desired, trace and cut it out.

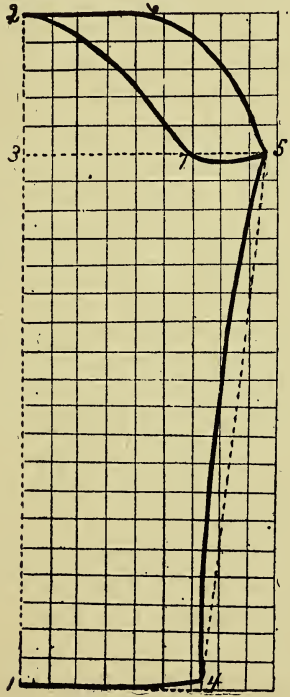
A nightgown with a yoke in the back wears longer and is more satisfactory. The front of the gown is cut on a fold of the cloth, fullness being allowed on the shoulder, or beyond the front edge of the pattern, according to the style of garment desired. The extra width

at the bottom of the front and back is supplied by gores of the same length and width. For a very wide gown the gores should extend up under the arm. The opening may be either in the middle of the front or on the left side.

When cutting the garment the exact length may be obtained by measuring from the bust line the length to the bottom of the gown. All the seams in the body of the gown should be felled or French seamed. From five to six yards of muslin are required to make a night-gown.

Nightgown Sleeve:—The measurements taken for this sleeve were:

Outside shoulder to hand.....24 inches
Inside arm's eye to hand.....19 inches
Arm's eye .....12 inches
Hand ..... 8 inches



NIGHTGOWN SLEEVE.

Draft this sleeve with the fold of paper towards you.

From 1 measure up on the fold to 2 the outside length of sleeve, and from 1 to 3 the inside measure.

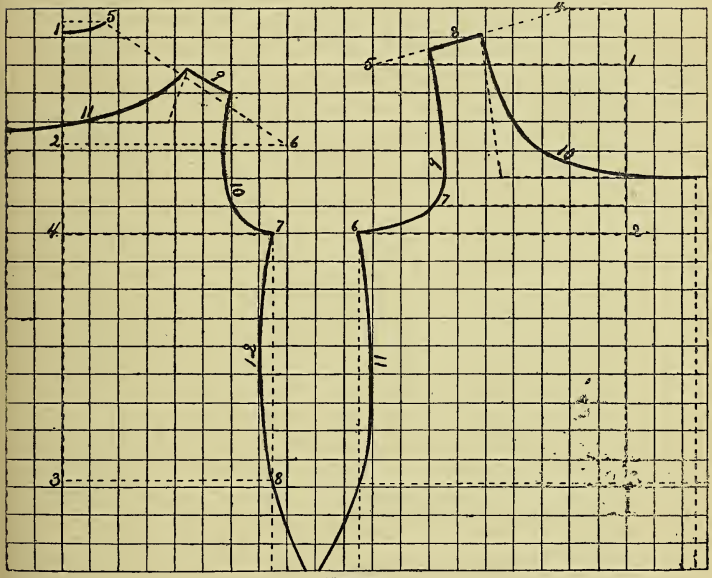
From 1 measure out to 4 half the hand measure, plus two and one-half inches. From 3 measure out to 5 half the arm's eye, plus two and one-half inches. From 2 measure out to 6 half the arm's eye, less one and one-half inches, and from that point draw an outward curved line to 5 for the upper side of sleeve.

For the curve under the arm measure in from 5 to 7 one-fourth the arm's eye, and draw an outward curved line from 2 through 7 to 5, extending it one-fourth inch below the arm's-eye line. Connect 5 and 4 with a dotted line. Mark the length of inside arm's eye to hand measurement, then draw a slightly curved line for the seam. For the bottom of sleeve connect 1 and 4 with a slightly curved line.

Cut the pattern through both thicknesses of paper, cutting the upper portion first. Then, opening the pattern, cut out on the line from 2 through 7 to 5. Allow for seams. Open the pattern and pin to the material with the line 1 to 2 straight with the warp. Finish with French seam, and gather the top from one and one-fourth inches above 5 around to one and one-half inches above 7, always arranging the fullness so that it will be greatest about an inch in front of the shoulder seam, gradually lessening it as it nears the seams of the sleeve.

The sleeve should be placed in the gown so that the seam will be two and a half to three inches in front of

the under-arm seam. The sleeve as drafted is as long as it should be when finished. Fold back the width of the trimming. Gather the bottom of sleeve to within one inch of each side of the seam, and put on the trimming with a narrow band.



CHEMISE.

CHEMISE.

The following measurements were used for the chemise illustrated:

Neck	12	inches
Bust	34	inches
Waist	24	inches

Back	16 inches
Under arm	$8\frac{3}{4}$ inches
Chest	13 inches
Width of back	$11\frac{1}{2}$ inches
Shoulder	$5\frac{1}{2}$ inches

Back:—Draw a horizontal line two inches from the edge of the paper, and measure down on this line one-fourth of an inch to 1 for the curve at the neck. From 1 measure down four inches to 2 for the slant of the shoulder seam, and from 1 to 3 measure the length of the back to determine the waist line. From 3 measure up to 4 the under-arm measure.

From 1 measure out to 5 one and one-half inches for a twelve-inch neck, allowing one-eighth of an inch for each additional inch in the neck measurement, or deducting the same amount for each inch if the neck measurement be less than twelve inches. From 2 always measure out eight inches to 6 to get the correct shoulder slant. From 4 measure out to 7 one-half the width of the back plus one and three-fourths inches, which will bring the seam under the arm, as no under-arm piece is used in this garment. Measure out a like amount from 3 to 8, and connect 7 and 8 by an inward curved line.

Connect 5 and 6 by a dotted line, marking off the length of the shoulder. Figure 9 illustrates the width of the shoulder seam in a chemise, which is two inches. 11 is the neck curve drawn from the shoulder to three-fourths of an inch above 2, and 10 is the arm's-eye curve

drawn from the shoulder to 7. The under-arm seam, 12, is a curved line drawn from 7 to 8. Dotted lines show the fullness allowed in the back, but more may be added if desired. A square cut is also shown by a dotted line.

Front:—Draw a horizontal line three inches from the edge of the paper. From the top of the paper measure down two inches to 1, and from 1 always measure six inches to 2 for the bust line. From 2 to 3 is the under-arm measure, 3 being the waist line.

Measure out from main line to 4 two inches for a twelve-inch neck, allowing one-eighth of an inch more for each additional inch in the neck measurement, and deducting the same amount if the neck measures less than twelve inches. Always measure out nine inches from 1 to 5 to determine the correct slant of the shoulder seam.

From 2 to 6 is the bust line, which is obtained by subtracting from the bust measure the width of the back and dividing the remainder by two for half of the front. But as the back has been made one and three-fourths inches wider, so that the seam will come under the arm, this amount must be taken from the front. 7 is the chest line taken one inch above the bust line and out one-half of the chest measurement.

Connect 4 and 5 with a dotted line, marking the length of the shoulder, and making the shoulder seam of the garment, 8, two inches wide. 9 is the arm's-eye curve drawn from the shoulder through 7 to 6, the bust

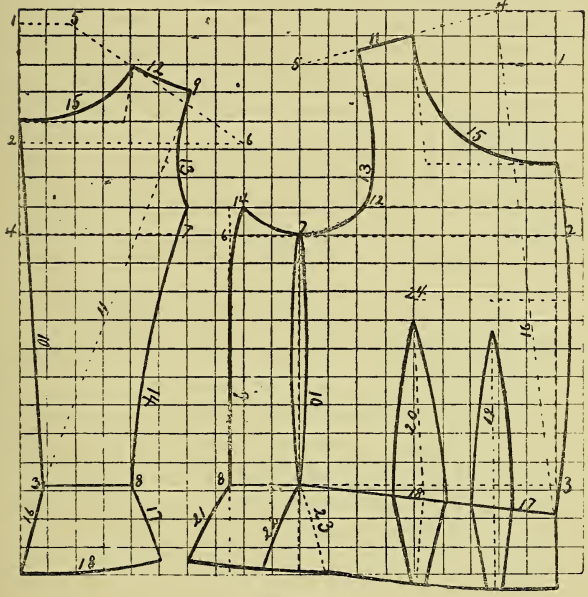
line. 10 is the neck curve drawn from the shoulder to one inch above the chest measure.

A square cut may be obtained by following the dotted line. For the seam under the arm draw 11, an inward curved line, from 6 to the waist line. Dotted lines show the amount of fullness required for the front. The chemise should be finished with French seams.

It may be cut just to the waist line, or two or three inches below it, if for a Marguerite, or it may be cut long and made plain or with a ruffle on the bottom like an underskirt. The neck and sleeves are pretty finished with beading with ribbon drawn through it to regulate the fullness.

CORSET COVER.

The measurements taken for the corset cover illustrated were:



CORSET COVER.

Neck	12 inches
Bust	34 inches
Waist	24 inches
Front	19½ inches
Length of back	16 inches
Back balance	14½ inches
Under arm	8¾ inches

Chest ..... 13 inches
Width of back..... $11\frac{1}{2}$ inches
Shoulder ..... $5\frac{1}{2}$ inches
Dart No. 1..... 6 inches
Dart No. 2..... $6\frac{1}{2}$ inches

Back:—In drafting the back first draw a horizontal line the length of the paper and one inch from the edge. Measure down on this line one-fourth of an inch to 1 to find the curve at the neck. From 1 always measure down four inches to 2 to find the correct slant of the shoulder seam; and from 1 measure the length of the back to 3 to find the waist line. From the waist line, 3, always measure up on the line to 4 the under-arm measurement.

Beginning at the top measure out from 1 to 5 one and one-half inches for a twelve-inch neck, allowing one-eighth of an inch for each additional inch in the neck measurement, or deducting the same amount if the neck measure is less than twelve inches. Always measure out eight inches from 2 to 6 for the slant of the shoulder seam. From 4 measure out to 7 one-half the width of the back, and from 7 measure up one inch and out one-half inch to get the curve of the arm's eye.

Measure in from 3 three-fourths of an inch for the slant of the seam in the center of the back; and from that point measure to 8 one-half of the width of the back at the waist line. For a twenty-four inch waist this measurement is three and one-fourth inches for a corset cover. For each additional inch in the waist measure-

ment allow one-fourth of an inch, and for each inch less deduct the same amount.

Connect 5 and 6 with a dotted line and mark the length of the shoulder. Draw the slant in the back, 10. 11 is the back-balance, and determines where the shoulder seam should come. From 7 mark up one inch, and from that point draw 14, which is an inward curved line. 13 is the arm's-eye curve, and is drawn from 9 to the point one inch above 7. The shoulder seam, 12, should be two inches wide. 15 is the neck curve, and is drawn from the shoulder to a point three-fourths of an inch above 2.

If a square cut is preferred it may be obtained by following the dotted lines. 16 is a straight line extending three inches below the waist line and out to the main line. 17 is an outward curve three inches down and slanting one inch. 18 is a slanting curve connecting 16 and 17.

Front:—To draft the front of a corset cover first draw a horizontal line two inches from the edge of the paper. Measure down on the line two inches to 1 to find the correct slant of the shoulder seam. From 1 always mark down six inches to 2 to find the bust line. Measure from 2 to 3 the length of the under-arm measurement to find the waist line.

Measure out on the upper edge of the paper two inches from the main line to 4 for a twelve-inch neck, allowing one-eighth of an inch for each additional inch in the neck measurement, or deducting the same amount

if the neck measure is less than twelve inches. From 1 always measure out nine inches to 5, which will give the correct slant of the shoulder.

From 2 to 6 is the bust line. To find the length of this line subtract the width of the back from the bust measurement, and, since but one-half of the front is being drafted, divide the remainder by two and the number of inches will be the length of the line from 2 to 6. From 6 mark in two and one-half inches to 7 for the under-arm piece for a twenty-four-inch waist, add or deduct one-eighth of an inch for each inch more or less in measurement. The same amount is also marked in from 8 on the waist line. Draw a straight line, 9, from 8, extending it up one inch above 6.

Connect 7 with the waist line by a dotted line, 10, and on each side of this dotted line are slightly curved lines which outline the forms. Connect 4 and 5 with a dotted line, marking off the length of the shoulder, and making the shoulder seam, 11, two inches long. One inch above the bust line measure out to 12 one-half of the chest measure. Draw the arm's-eye curve, 13, from the shoulder through 12 and 7 to 14. 14 is the curve one-half inch in from the top of line 9, extending down two and one-half inches to the line. 15 is the neck curve drawn from the shoulder to one and one-half inches above the chest line.

To find the permanent waist line subtract from the front measurement the number of inches across one-half of the back of the neck. Measure the remaining

number of inches from 4 to the main line, and draw the waist line from that point to the under-arm piece. Mark in on the waist line one and one-half inches to find the location of the first dart.

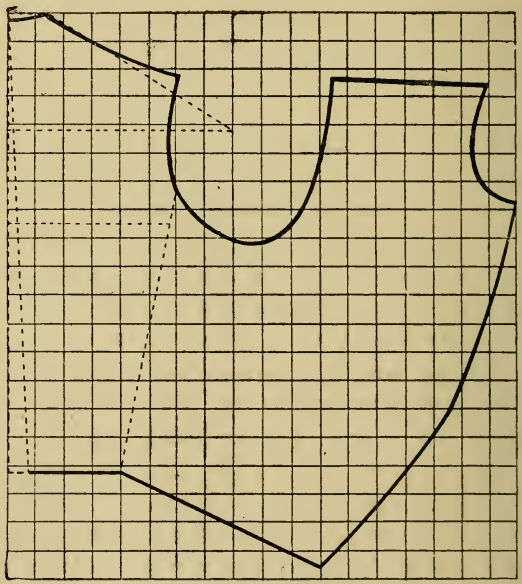
To find the quantity to put into the darts, measure the back, which in the illustration is six and one-half inches. Subtract this from the waist measure, twenty-four inches, and there are seventeen and one-half inches left. This divided by two would give eight and three-fourths inches for each side of the front, which measured out on the waist line leaves three and one-half inches for the darts. As the first dart is always smaller than the second, mark off one and one-half inches for the first and two inches for the other, leaving a space three-fourths of an inch wide between the darts.

For a waist measurement over twenty-six inches, the space between the front and first dart, also the space between the darts, should increase one-eighth of an inch for each additional inch in the measurement.

The first dart, 19, is straight, and the second, 20, slants slightly towards the back and is one-half inch higher than the first. The dart lines are slightly curved to the waist line and straight below; the width at the bottom being just half that at the waist line. 21, 22 and 23 are curved lines extending down three inches from the waist line. 21 slants one and one-half inches. 22 slants one and one-fourth inches. And 23 slants three-fourths of an inch.

Measure up three-fourths of an inch from the top

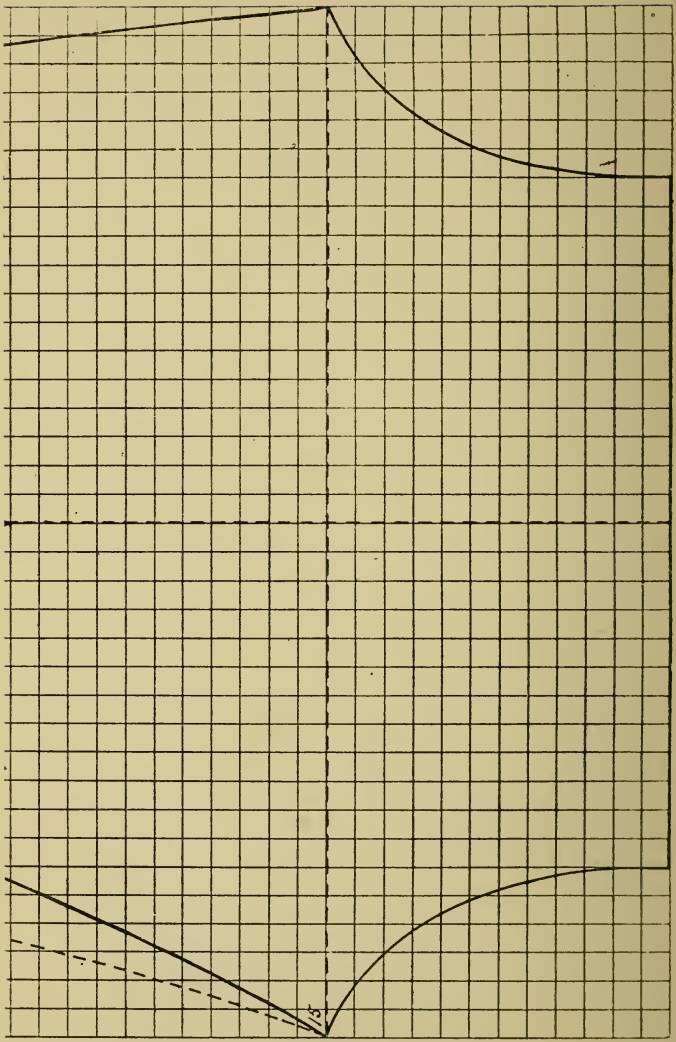
of the second dart, and draw a dotted line extending one-half of an inch beyond the main line. Then draw an outward curved line from the neck through that point to the waist line. Trace and allow for seams when cutting the waist. Begin at waist line and baste carefully on tracing. A corset cover should be made with felled seams. One yard of material is required for making this garment.



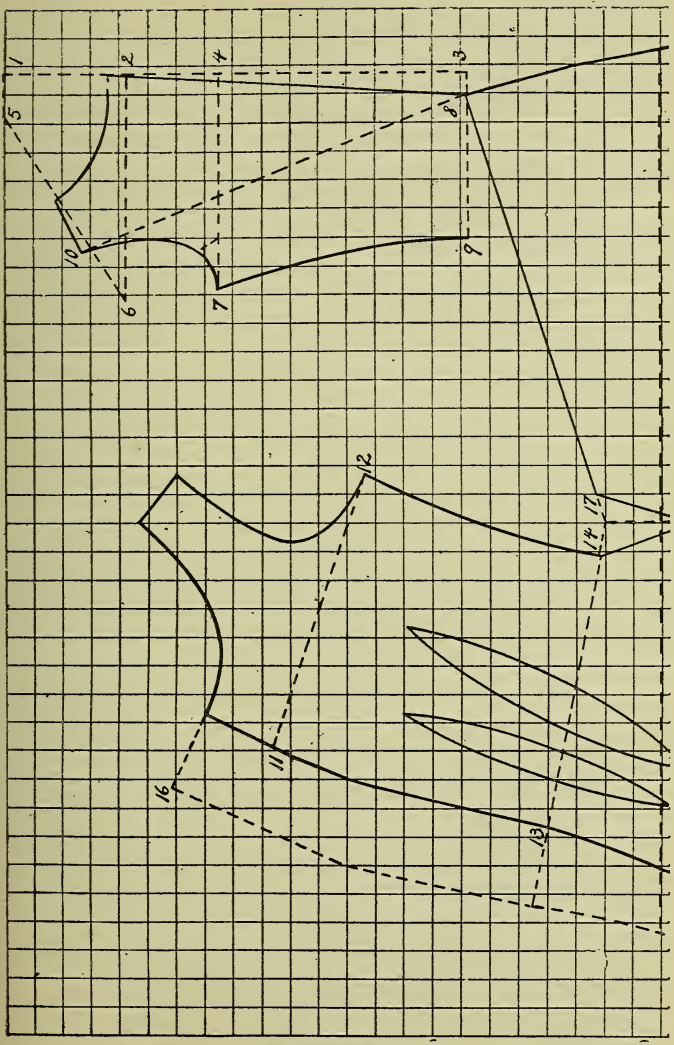
SEAMLESS CORSET COVER.

Seamless Corset Cover:—Another method of making a pretty corset cover is to make it without seams. First draft a French back, then draft a plain front.

Instead of putting in darts, take off in front from the bust line to waist line one-half the quantity usually used in darts. Take off the other half from the back seam slanting in from bust line to the waist line. Cut out this front and connect it with the French back, as indicated by the dotted line. This makes a bias front. Place the center of back on a fold of the material, allowing for fullness if desired. Finish with a three-inch ripple at the bottom. A narrow beading, through which ribbon can be drawn, makes a pretty finish for the neck.



COMBINATION SUIT.



COMBINATION SUIT.

COMBINATION SUIT.

To draft a combination suit, first draft a French back, the same as for a corset cover, except that, from 4 to 7, measure out one-half the width of back, plus one and three-fourths inches, and from 8 to 9 measure out the width of back on the waist line, plus one and three-fourths inches, to bring the seam under the arm.

Then draft a corset cover front, except that the one and three-fourths inches added to the back is taken from the bust line, 11 to 12, and the waist line, 13 to 14, is drafted the same length as the bust line, thus omitting the under-arm piece and bringing the seam directly under the arm.

Draft the drawers as if they were to be made separately, except that two inches should be added to the top to take the place of yoke. Unfold the drawers pattern and join the front to the front of the waist, placing 14 one inch from the top of the fold, as indicated by the dotted line in diagram.

The front of the drawers will then extend three inches beyond the front of the waist. If the suit is to be made with darts, cut the front of the drawers on line 13 to 15, and extend the darts down into the front of drawers, as illustrated. If fullness instead of darts is desired, retain the full width of drawers, extending the same amount up even with the neck to 16, as indicated by the dotted line.

From the top of fold measure out one inch to 17 for dart over hip. Measure down three inches on the

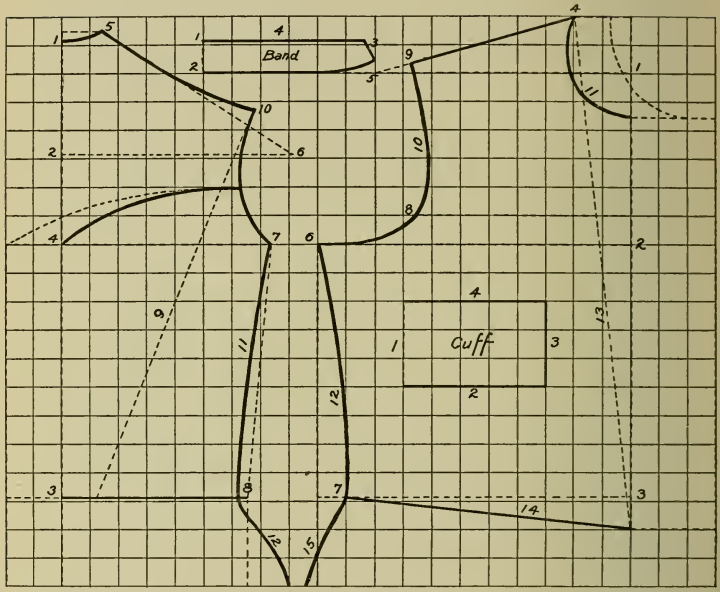
fold for length of dart. Gather the back of drawers, leaving a plain space two inches in from 17, and join them to the back of waist.

A union suit is very pretty made with a double row of beading at the waist line and the fullness drawn up with ribbons. The neck may be finished in the same manner. If the combination suit is buttoned in front, the drawers will have to be made open. Finish with felled seams. Face arm's eye and opening of drawers. Two and one-half yards of muslin are required to make a union suit, it trimmings are of other material. If trimmed with itself, three yards would be needed.

Draft a child's waist and drawers, joining them together in the same manner as for the adult's union suit, and a nice pattern for children's night drawers will be obtained. For a child the waist should open in the back, and the back of the drawers be put into a band; which should button to the waist. The leg should be drafted to the ankle. Either a two-piece or nightgown sleeve may be used.

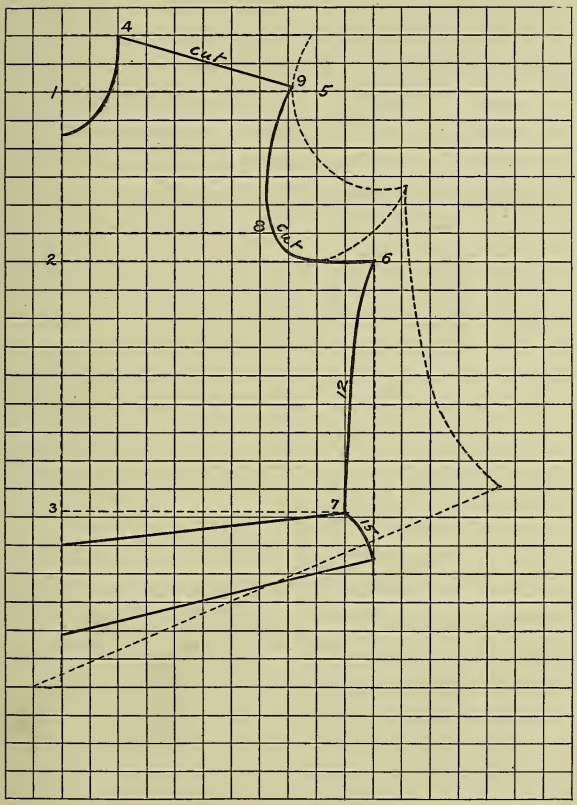
Shirt Waist.

The following measurements were used to draft the shirt waist illustrated:



SHIRT WAIST.

Neck	12 inches
Bust	36 inches
Front	19½ inches
Length of back	16 inches
Under arm	8¾ inches
Chest	15 inches
Width of back	12 inches
Shoulder	6½ inches


4
Curve
1
9
5
8
Curve
2
6
12
3
7
13

Back:—For drafting the back draw a horizontal line the length of the paper and one inch from the edge. From top of the line measure down one-fourth of an inch for curve at back of neck. From 1 always measure down four inches to 2 for shoulder slant, and from 1 measure down to 3 the length of the back to find the waist line. From 3 measure up to 4 the length of the under-arm measurement to determine the top of under-arm seam. From 1 measure out to 5 one and one-half inches for a twelve-inch neck, adding or deducting one-eighth of an inch for each inch more or less in the neck measurement. From 2 always measure out to 6 eight inches for slant of shoulder seam. From 4 measure out to 7 half the width of back, plus one and one-fourth inches, to bring the seam under the arm. From 3 measure out to 8 the same number of inches less one inch.

Connect 5 and 6 with a dotted line, marking the length of shoulder.

Draw line 9 carrying it through the point marking the length of shoulder and one-half inch beyond. Make a slightly curved line from the shoulder seam; and from 1 to 5 draw the neck curve. Connect 10 and 7 with a curved line for the arm's eye.

Draw a dotted line from the bust line to the waist line and draw a slightly curved line, 11, for the under arm seam. 12 is an outward curve extending down three inches from the waist line and slanting one inch. The dotted line shows fullness allowed in the back. Any

style yoke can be made or the back left plain and with a few gathers at the waist line.

Front:—For drafting the front draw a horizontal line the length of the paper and two inches from the edge.

From the top of line measure down two inches to 1, for correct shoulder slant. From 1 always measure down six inches to 2 to find the bust line; and from 2 measure down to 3 the length of the under-arm measurement to find the waist line.

From the top of line measure out to 4 two inches for a twelve-inch neck, adding or deducting one-eighth of an inch for each inch more or less in the neck measurement. From 1 always measure out nine inches to 5 for slant of shoulder seam.

To find the width of front on the bust line, subtract the width of back from the bust measurement and for drafting half the front, divide the remainder by two. The number of inches obtained less the one and one-fourth inches added to the back, is the length of line from 2 to 6. Measure out the same number of inches from 3 to 7, less one inch. One inch above the bust line measure out to 8 one-half width of chest. Connect 4 and 5 with a dotted line, marking the length of shoulder seam. 10 is the arm's eye curve drawn from the shoulder to the bust line, touching the chest line. From 4 draw 11, the neck curve, to the point one and one-half inches below 1 for a twelve-inch neck, adding one-eighth of an inch for each additional inch, and deducting the

same amount for each inch less in the neck measurement.

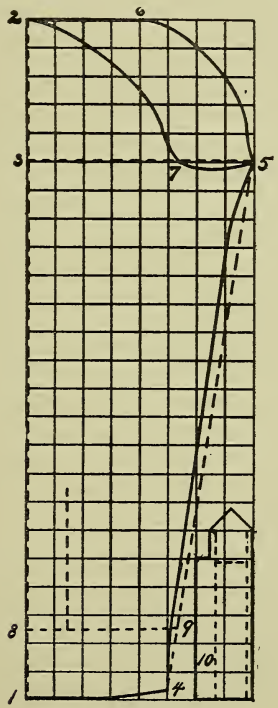
Connect 6 and 7 with a dotted line, and for the under-arm seam draw 12, a slightly curved line. To find the permanent waist line measure from 4 to the main line the front measurement, less the number of inches measured from 1 to 5 across the back of neck. Draw 14 the correct waist line. 15 is an outward curve extending down three inches from the waist line and slanting one and three-fourths inches. The dotted lines show fullness allowed on the shoulder and from the neck.

To obtain the bias effect under the arm and to give the proper fullness for a plain waist turn the front as already drafted, so that the shoulder seam will be straight with the woof threads and draw the arm's eye curve and under arm seam, as shown by the dotted lines in the illustration. Remove the pattern and cut the shoulder and arm's eye on the original lines.

Finish the shirt waist with French seams, except on the shoulder, which should be stitched flat. When no seam is desired on the shoulder, put the back and front together, joining the shoulder seams, and trace a yoke as deep in front as desired. To fit a shirt waist, pass the hand down from the shoulder in back to the waist line, smoothing the material so that the warp will be straight from the shoulder to the waist line. Use the same method in front to find the amount of fullness to be gathered on the waist line, thus avoiding wrinkles un-

der the arm. Often a dart taken diagonally at the waist line will give a more perfect fit under the arm.

Band:—The neck band should be one and one-fourth inches wide. 1 to 2 is the middle of the back and should be cut on a fold of the material. The band should be made lengthwise of the cloth. The curved edge is sewed to the neck of the waist.



SHIRT WAIST SLEEVE.

SHIRT-WAIST SLEEVE.

Shirt-waist Sleeve:—The following measurements were taken for the shirt-waist sleeve illustrated:

Outside shoulder to hand.....24 inches
Inside arm's eye to hand.....19 inches
Arm's eye .....12 inches
Hand ..... 8 inches

Draft the sleeve on a fold of paper, having the folded edge of the paper towards you. From 1 measure up the length of the sleeve to 2, and from 1 measure up to 3 the inside measurement. From 1 measure out to 4 half the hand measurement, plus one inch. From 3 measure out to 5 half the arm's eye measurement, plus two inches. From 2 measure out to 6 half the arm's eye measurement, less two inches. For the curve under the arm measure in from 5 to 7 one-fourth the arm's eye.

For the top of the upper portion of sleeve draw an outward curved line from 6 to 5, and for the top of the under portion draw another outward curve from 2 through 7 to 5, extending it one-fourth of an inch below arm's eye line. Connect 5 and 4 with a dotted line. Measure down the inside length, and draw an inward curved line for the seam. For the bottom of the sleeve connect 1 and 4 with a slightly curved line. The sleeve is drafted as long as it should be when finished. If made with a cuff, cut the sleeve off on dotted line 8 to 9.

Cut the opening of the sleeve one and one-half inches in from 8, extending it up half the length of the cuff

so that in laundering the cuff will iron easily. The cuff for an eight-inch hand is a straight band ten inches long by two and one-half inches wide. Cut the lining lengthwise and the outside crosswise of the material. The interlining should be of butcher's linen, and should always be shrunk before used. Finish the opening with a narrow extension for the under side. For the upper, a piece like the illustration is used. Stitch the short side to the opening with the seam on the right side and fold over on dotted line, 10, so that the pointed piece will be on the right side of the sleeve. Fold under the edges and stitch close to the edge.

The sleeve should be placed in so that the seam will come from two to two and one-half inches in front of the under arm seam, and the fullest part of the gathers should be just in front of the shoulder seam. Sew in the sleeve and overcast the seam, except for very thin materials, when the seam should be bound or French seamed. Tack the seam back to the lining of the yoke, so that the sleeve will lie flat on the shoulder. From two to two and one-half yards of material are required for making.

Dress Skirt.

SEVEN GORE SKIRT.

Table of Measurements.

Hip	Front Gore		Side Gore No. 1		Side Gore No. 2		Back	
34	4⅜	8½	5¼	12½	5½	13¼	9¼	24½
36	4½	8⅝	5½	13⅜	5⅝	13½	9½	24⅝
38	4⅝	8¾	5⅝	13	6	13¾	9¾	25
40	4¾	8⅞	6	13¼	6¼	14	10	25¼
42	4⅞	9	6¼	13½	6½	14¼	10¼	25½
44	5	9⅛	6½	13⅝	6⅝	14½	10½	25⅝
46	5⅛	9¼	6⅝	14	7	14⅝	10⅝	26
48	5¼	9⅜	7	14¼	7¼	15	11	26¼

The measurements of the skirt illustrated are:

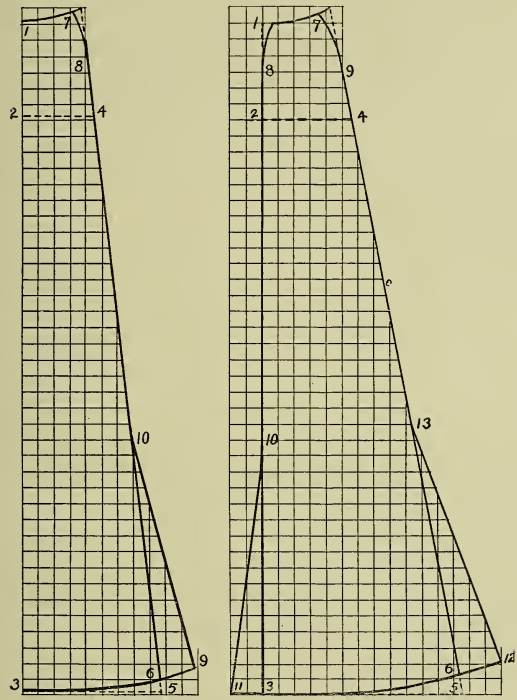
Band .....24 inches

Hip .....38 inches

Length .....42 inches

The band measure is taken tightly around the waist. To find the hip measurement, measure down from the waist line six inches, then around the hips. The length is found by measuring from the waist line to the floor. To secure the correct length, this measurement should be taken three times; that is, down the front, over the hips and down the back. For drafting the skirt pattern

follow the figures, opposite hip measure in the table of measurements.



SEVEN GORE SKIRT.

Front:—To draft the front mark down from the top of the paper to 1 three-fourths of an inch for the curve at the top. From 1 measure down six inches to 2, to find the hip line, and from 1 also mark off to 3 the length of the front. From 2 measure out to 4, four

and five-eighths inches, the width of the front on the hip line; and from 3 measure out to 5 eight and three-fourths inches, the width of the bottom of front.

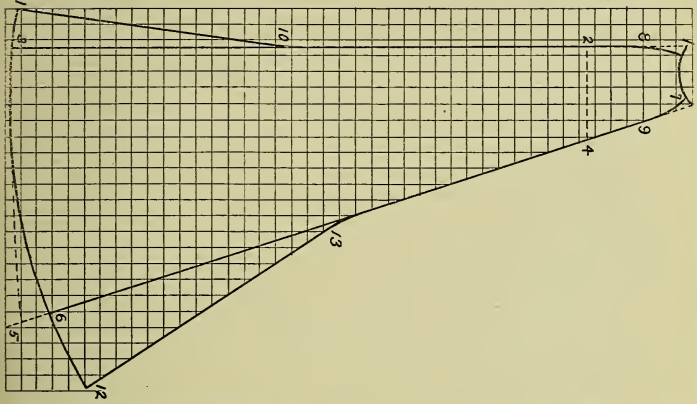
Draw a line from the top of the paper through 4 to 5 marking the length of the front 6. From the top measure in to 7 one-half inch, and draw a curve from that point to 1 for the top of the front. Draw a curve from 7 extending down three and one-half inches to 8.

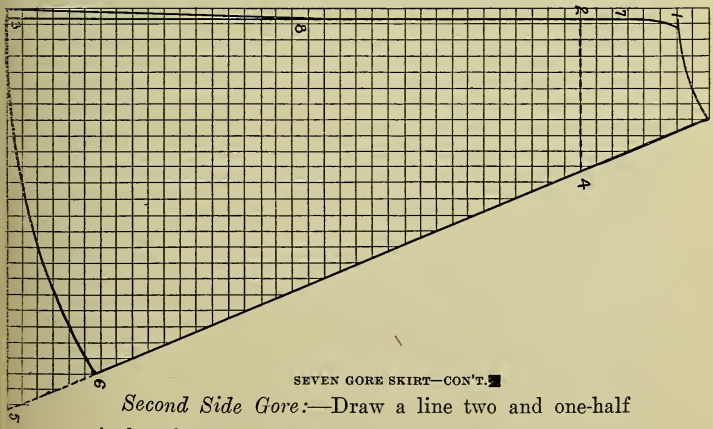
From 6 measure out two and one-half inches to 9 for the flare of the front gore. Also measure up from 6 fifteen inches to 10 and draw a line to 9. Draw a curved line from 3 to 9 for the bottom of the front.

Side Gore:—For the side gore draw a line two inches from the edge of the paper. Mark down on the line one inch to 1 for the curve at the top. From 1 measure down six inches to 2, to find the hip line, and from 1 to 3 the length of the skirt. From 2 measure out five and three-fourths inches to 4, the width of the first side gore on the hip line; and from 3 measure out to 5 the width of the gore at the bottom.

Draw a line from the top of the paper through 4 to 5, marking the length of the gore 6. From 1 mark in one-half inch and draw a curved line extending down three and one-half inches to 8; and from the top of the paper mark in one-half inch to 7 and draw a curved line down three and one-half inches to 9. Draw a curved line from 7 to 1 for the top of the gore. From 3 measure up fifteen inches to 10 for the flare of the first side gore and draw a line to 11. From

6 measure out three inches to 12 and up seventeen inches to 13. Draw a line from 13 to 12 and a curved line from 11 to 12 for the bottom of the gore.





SEVEN GORE SKIRT—CON'T.

Second Side Gore:—Draw a line two and one-half inches from the edge of the paper. Measure down

on the line one-fourth inch to 1 for the curve at the top. From 1 measure down six inches to 2 to find the hip line, and from 1 the length of the skirt to 3. From 2 measure out six inches to 4, the width of the second side gore on the hip line, and from 3 to 5 thirteen and three-fourths inches the width of the gore at the bottom. Draw a line from the top of the paper through 4 to 5, marking the length of the skirt 6. From 1 measure in one-half inch and draw a curved line extending down three and one-half inches to 8. From the top of the paper measure in one-half inch to 7 and draw a curved line three and one-half inches down to 9. For the top draw a curved line from 7 to 1, curving it down three-fourths of an inch. From 3 measure up seventeen inches, 10, and draw a line to 11 for the flare on the front of the gore. For the flare on the opposite side measure out from 6 five inches to 12, and up nineteen inches to 13. Draw a line from 13 to 12 and a curved line from 11 to 12 for the bottom of the skirt.

Back:—For the back gore draw a line the length of the paper, three-fourths of an inch from the edge. From the top of the paper measure down two inches to 1 for the curve at the top. From 1 measure down six inches to 2 to find the hip line, and from 1 to 3 the length of the skirt. From 2 measure out to 4 nine and three-fourths inches the width of the back on the hip line. From 3 measure out to 5 twenty-five inches the width of the back at the bottom.

Draw a line from the top of the paper through 4

to 5 marking the length of the skirt in the back, 6.

From 1 measure in one-half inch and draw a curved line down three and one-half inches to 7 and from the top of the paper draw a curved line to 1 for the top of back gore. From 3 measure up nineteen inches and draw a line from 8 to 9 for the flare of the back breadth.

Draw a curved line from 9 to 6 for the bottom of the back.

When cutting out the pattern allow the same amount on all gores for seams, and allow two inches on the bottom for making. Always notch the gores when cut so that no mistake will be made in putting the skirt together. Before cutting into either the lining or outside material lay the entire pattern on the cloth so that no mistake will be made in cutting. If a lining is used cut that first and place the gores cut from the lining upon the material so that the warp of the dress goods will be straight with the warp of the lining, and cut the outside carefully so that the seams will be straight.

Baste up the lining, commencing at the top, and fit it first. The lining being properly cut, fitted and stitched, remove bastings, face the placket which should be left open ten inches. Put the lining into a belt placing the center of the front gore to the middle of the belt.

Make the belt of silk, or some firm lining material, cutting it two and one-half inches wide, and the

length of the waist measure, adding two and one-half inches for making. In putting a skirt into the band hold the skirt towards you, and put it on, slightly full. Try the skirt on and arrange the fullness in the back in pleats or gathers, according to fashion.

The skirt should be finished around the bottom with a facing and a braid which has been thoroughly shrunk.

Fit the gores of the material the same as the lining, and if desired it can be put in the same band. Try on the skirt to see if any alterations are necessary. If not, stitch it up and after cutting out the basting threads press open the seams thoroughly. If the seams have not been stitched straight, waves will appear in them which will spoil the appearance of the skirt.

The table of measurements is for a medium or forty-two inch length. For each extra inch in length allow one-fourth of an inch on each gore at the bottom. Thus, if a skirt measures forty-three inches in length, the bottom of the front gore would be nine and one-fourth inches, the bottom of the side gore thirty and one-fourth inches, and the back thirty-four and one-fourth inches.

When cutting out the pattern allow the same amount on all gores for seams, and allow two inches on the bottom for making. Always notch the gores when cut, so that no mistake will be made in putting the skirt together. Before cutting into either the lining or outside material, lay the entire pattern on the cloth, so that no mistake will be made in cutting. Cut the lining first, the pattern having been pinned securely to it. Place

the gores cut from the lining upon the material so that the warp of the dress goods will be straight with the warp of the lining, and cut the outside carefully, so that the seams will be straight.

Baste up the lining and fit it first, putting one dart in the center of front and, if the skirt has a wide side gore, to make it fit smoothly over the hips a dart should be taken in the gore three and one-half inches from the front seam, or directly over the hip bone. The length of the dart varies according to the prominence of the hips. The lining being properly cut and fitted, remove the basting, and sew the stiffening for the bottom of the skirt to each gore separately.

If haircloth is used it should be shrunk first, and each piece bound at the top. Haircloth, which is the best stiffening to use for a skirt, should be cut straight of the weave, but canvas or crinoline should be cut on the bias. Baste the stiffening firmly and smoothly on the lining, and stitch twice across the top to hold it securely in place. Next fit the gores of the material to the gores of the lining, with the interlining between. Smooth the outside on the lining, basting from the top down the straight edge first, then across the top. The front gore should be basted down the middle first. Press the hand firmly over the outside from top to bottom of the gore, so that the goods will not sag from the lining when the skirt is finished. Wide gores should be basted lengthwise two or three times.

Baste the gores together, always beginning at the

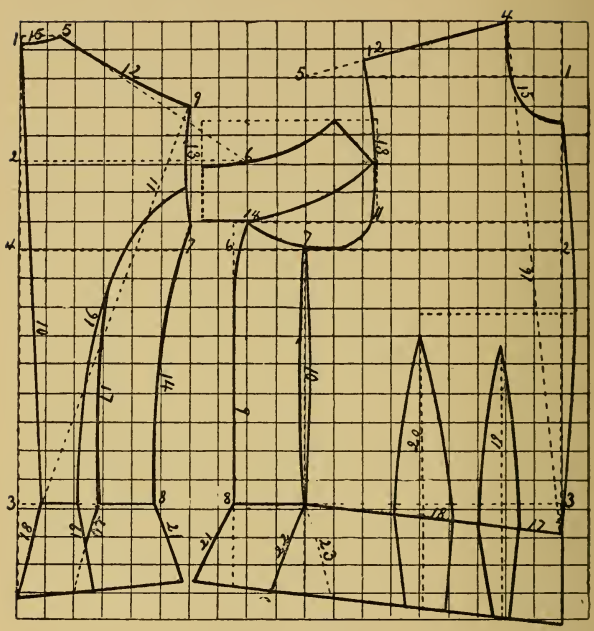
top, and using a fine basting stitch over the hips. It is best to take but one stitch at a time when basting a skirt, so that the side next to the seamstress will not be fulled. Stretch the material over the dart in the front, so that the outside will be smooth. The dart in the side gore cannot be concealed, but must be taken in the outside also. Try on the skirt to see if any alterations are necessary. If not, stitch it up, and after cutting out the basting threads press open the seams thoroughly. If the seams have not been stitched straight, waves will appear in them, which will spoil the appearance of the skirt. Overcast the seams and the top of the skirt.

Make the belt of silk, or some firm lining material, cutting it on the bias two and one-half inches wide and the length of the waist measure, adding one and one-half inches for making. Double and twist a strong cord. Fold the belt in the center lengthwise, run the cord through, and stitch on the machine. Turn in the ends and overhand them. Place the middle of the front gore to the middle of the belt. Then, with the skirt next to you, hold it slightly full, and baste it to the belt, which should extend to the under part of the placket, or it may be placed across the placket, in which case the belt should be cut two inches larger than required. Face the upper side of the placket by a straight piece of material two inches wide. The under part of the placket should be of the material, lined with the skirt lining and two inches wide when finished. A straight band is preferable for very slight figures.

Try the skirt on and arrange the fullness in the back in pleats or gathers, according to fashion. If the skirt hangs correctly make it just the right length by pinning it up around the bottom. Baste where pinned, and try on again to be certain that the length is accurate. Face up the seams as high as the interlining, with narrow strips of lining cut lengthwise. The bottom of the skirt should be left turned up one or more inches. Trim it evenly, and bind it with a bias piece of lining. Then hem it down. Finished in this way the haircloth or canvas will not wear through the bottom of the skirt, and the underside presents a very neat appearance.

Brush braid, corduroy, or any other finish may be used on the bottom of the skirt. Fasten the belt with two hooks and eyes. Also put hooks and eyes on the placket, so that the opening may be kept firmly closed. Sew hangers on the inside of the skirt just over the hips.

Furnishings for Skirt:—The following list of furnishings for a dress skirt will be found helpful, although quantities may vary with changes of style. For a skirt four and one-half to five yards wide, requires three and one-half to four yards or three lengths of material; lining five yards, or if silk is used, eight to ten yards; haircloth one and one-half to two yards; large hooks and eyes; one-half yard of elastic for holding fullness in place; brush braid, or other binding, four and one-half to five yards.



THE PLAIN WAIST.

THE PLAIN WAIST.

The measurements taken for this waist were:

Neck	12	inches
Bust	34	inches
Waist	24	inches
Front	19½	inches
Length of back	16	inches
Back balance	14½	inches
Under arm	8¾	inches
Chest	13	inches

Width of back.....11½ inches
Shoulder ..... 5½ inches
Dart No. 1..... 6 inches
Dart No. 2..... 6½ inches

Back:—To draft the back of the waist first draw a horizontal line the length of the paper and one inch from the edge. Measure down on this line one-fourth of an inch to 1 to find the curve at the neck. From 1 always measure down to 2 four inches to find the correct slant of the shoulder seam, and from 1 measure down to 3 the length of the back to find the waist line. The length of the under arm is measured up from 3 to 4.

Beginning at the top of the line measure out from 1 to 5 one and one-half inches for a twelve-inch neck, allowing one-eighth of an inch for each additional inch in the neck measurement, or deducting the same amount if the neck measures less than twelve inches. From 2 always measure out eight inches to 6 to find the correct shoulder slant. From 4 measure out to 7, one-half the width of the back, and from 3 measure out the same number of inches.

Draw from 1 to 5 the curve for the neck, 15. Connect 5 and 6 with a dotted line, marking off the length of the shoulder. From 3 first mark off three-fourths of an inch on the waist line for the slant of the seam in the middle of the back; then one and one-fourth inches for the width of the back. Leave a space three-fourths of an inch wide, and for the side body mark off two inches to 8. The width of the back and side body

at the waist line vary with the size of the waist. The measurements given are for a twenty-four inch waist. For each additional inch allow one-fourth of an inch, one-eighth on the back and one-eighth on the side body. For each decreasing inch take off a like amount.

Draw the line 10 from 1 for the seam in the back. From the waist line at the center of the back draw the back balance, 11, through the point indicating the length of the shoulder, and curve the shoulder seam from 9 to 5. From 7 mark up one inch to find the curve of the arm's eye, and draw a slightly inward curved line from 9 to that point. Draw an inward curved line, 14, from the point one inch above 7 to 8 at the waist line.

One and one-fourth inches above the top of line 14 draw an inward curved line, 16, from the arm's eye to the second mark on the waist line. From one inch below the dotted line indicating the width of the back draw an outward curved line, 17, to the next mark on the waist line. This is the curve of the side body. 18 is a line drawn three and one-half inches down from the waist line, slanting three-fourths of an inch. 19 is three and one-fourth inches long, and slants three-fourths of an inch. 20 is a line the same length, and has the same slant, as 19. 21 is an outward curve drawn three inches down, and slants one inch.

Front:—To draft the front of the waist draw a horizontal line two inches from the edge of the paper. Measure down on the line two inches to 1 to find the correct slant of the shoulder seam. From 1 always

mark down six inches to 2 to find the bust line. Measure from 2 to 3 the length of the under-arm measurement to find the waist line.

Measure out on the upper edge of the paper two inches from the line to 4 for a twelve-inch neck, allowing one-eighth of an inch for each increase or decrease in the size of the neck. From 1 always measure out to 5 nine inches for the shoulder slant. From 2 to 6 is the bust line.

To find the length of this line subtract the width of the back from the bust measurement, and, since we are drafting but half of the front, divide the remainder by two, and the number of inches will be the length of the line from 2 to 6. From 6 mark in two and one-half inches to 7 for the under-arm piece for a twenty-four inch waist, add or deduct one-eighth of an inch for each inch more or less in measurement. The same amount is also marked in from 8 on the waist line.

Draw a straight line, 9, from 8, extending it up one inch above 6. Connect 7 with the waist line by a dotted line, 10. One inch above the bust line measure out one-half of the chest measurement to 11. Connect 4 and 5 with a dotted line, and mark off the length of the shoulder, 12. Draw the arm's eye, 13, curving from the shoulder through 11 and 7 to 14. Draw a curve, 14, one-half of an inch in from the top of line, 9, extending it down two and one-half inches to the line. Draw slightly curved lines each side of the dotted line, 10. The curve for the neck should be drawn from

the shoulder to one and one-half inches below 1 for a twelve-inch neck. Allow one-eighth of an inch for each additional inch in the neck measurement, and deduct the same amount for each inch less than twelve inches.

To find the permanent waist line subtract from the front measurement the number of inches across one-half of the back of the neck. Measure the remaining number of inches from 4 to the main line, and draw the waist line from that point to the under-arm piece.

Mark in on the waist line one and one-half inches to find the location of the first dart. To find the quantity to put into the darts measure the back, which in the illustration is six and one-half inches. Subtract this from the waist measure, twenty-four inches, and there are seventeen and one-half inches remaining. This divided by two would give eight and three-fourths inches for each side of the front, which measured out on the waist line leaves three and one-half inches for the darts. As the first dart is always smaller than the second, mark off one and one-half inches for the first and two inches for the second, leaving a space three-fourths of an inch wide between the darts.

For a waist measurement over twenty-six inches, the space between the front and first dart, also the space between the darts, should increase one-eighth of an inch for each additional inch in the measurement.

The first dart, 19, is straight, and the second, 20, slants slightly toward the back, and is one-half inch higher than the first. The dart lines are slightly curved

to the waist line, and straight below, the width at the bottom being just half that at the waist line.

Measure up three-fourths of an inch from the top of the second dart and draw a dotted line, extending it one-half of an inch beyond the main line. Then draw an outward curve from the neck to the waist line. 21, 22, and 23 are outward curved lines extending down three inches from the waist line; 21 slanting one and one-half inches, 22 slanting one and one-fourth inches, and 23 slanting three-fourths of an inch.

Allow for seams when cutting the pattern. Pin the pattern on the waist lining crosswise of the material, and trace on all the seams and the waist line before cutting into the cloth. Great care must be taken to baste the seams on the lines of tracing, to use a fine basting stitch, and to begin to baste at the waist line. When basting the shoulder seam the front should always be stretched on the back. A small dart in the arm's eye will give a more perfect fit for one who is very full in the bust or hollow in the arms' eye. After the lining has been basted it should be tried on and any necessary alterations made.

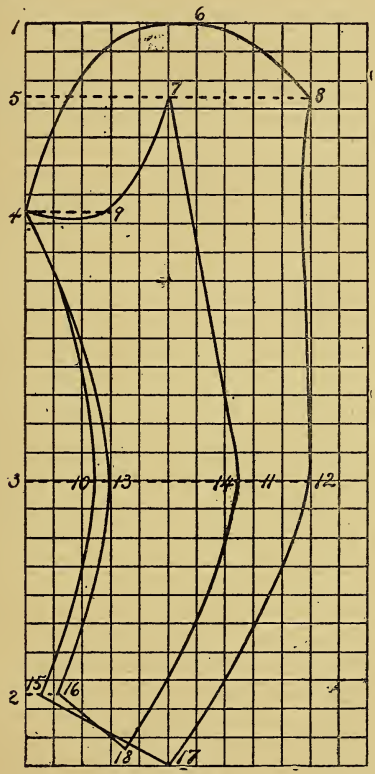
If the waist is to be made without seams on the outside, except under the arms, the seams in the back and the darts should be sewed, the basting removed, the seams pressed open and trimmed evenly, and the whalebones, which have been soaked to make them pliable, put in. All bones, except feather-bone, should be covered with a single casing, and stretched in at the waist line to prevent wrinkles in the waist.

Before putting on the hooks and eyes the front should be stitched just far enough from the edge to allow for a bone. Pin the fronts together and trace the places for the hooks and eyes, using the tape line for measuring. The markings should begin at the waist line and they should be an inch apart. Put the bones in the fronts before sewing on the hooks and eyes, which should be sewed on firmly. They will not unfasten easily if alternated. Plain hooks are preferable. Finish the front by facing over the hooks and eyes a bias piece of silk, or other light material.

The material for the outside may be put on the back, under-arm piece and front in any style desired, and the waist basted together again. It is a good plan to try on the waist once more before sewing up the under-arm seams. If satisfactory, sew and put in the whalebones, which should be sewn through to keep them from slipping out of place. Overcast the seams with twist, and face the bottom of the waist with a narrow bias piece of tailor's canvas, so that the waist will retain its shape. Cover the canvas with a bias piece of silk.

Collar:—The collar in the cut is for a twelve-inch neck, and is drafted in an oblong half the length of the neck. It is well to cut and fit a collar of crinoline first, and if satisfactory cut another from light weight buckram or two thicknesses of tailor's canvas stitched together. The outside may be put on in any style desired.

Sleeve:—The measurements taken for the sleeve illustrated were:



SLEEVE.

Arm's eye	12	inches
Outside length	26	inches
Shoulder to elbow	16	inches

Outside arm's eye to elbow.....13½ inches
Inside arm's eye to elbow..... 9½ inches
Elbow .....12 inches
Hand ..... 8 inches

To draft the sleeve fold the paper and measure on the fold the outside length of the sleeve from the edge of the paper to 1. To find the bottom of the sleeve mark 2, two and one-half inches from the edge of the paper. From 1 measure down to 3 the length from the shoulder to the elbow, to find where the elbow will come in the pattern. From 3 measure to 4 the length of the sleeve from the arm's eye to the inside of the elbow. From 3 measure up to 5 the outside arm's eye to elbow measurement.

To find the top of the sleeve measure out from 1 to 6, one-half of the arm's eye. The width of the sleeve is found by measuring out from 5 one-half of the arm's eye, plus four inches to 8 for the upper portion of the sleeve, and from 5 to 7, measure out half of arm eye, less one inch for the under part of the sleeve. From 4 measure out to 9 one-fourth of the arm's eye for the curve of the under-arm portion.

From 3 mark in two and one-half inches for the curve of the sleeve at the elbow. From 10 measure out to 11 one-half of the elbow measure, plus one and one-half inches to 12, so that the upper will be wider than the under portion of the sleeve.

To make a sleeve fit nicely the under part should curve more sharply than the upper. To give this effect, meas-

ure from 10 to 13 one-half of an inch, and from 13 to 14 the difference between the elbow measurement and the width of the upper. In the sleeve illustrated the elbow measurement was twelve inches, the width of the upper part of the sleeve seven and one-half inches, and the under portion would be four and one-half inches.

From 2 mark in one-half of an inch to 15 for the bottom of the sleeve. From 15 to 16 is three-fourths of an inch, and locates the inside seam of the under portion. The upper part of the sleeve is two inches wider at the wrist than the under; hence, for an eight-inch hand the upper would be five inches wide, and the under three inches. For the upper measure from 15 to 17 the required width of the upper at the wrist, 17 being one-half of an inch from the edge of the paper. Connect 16 and 18 for the under part of the sleeve at the wrist.

For the top of the sleeve draw a curve from 4 through 6 to 8. For the inside seam of the upper, draw a curved line from 4 through 10 to 15. Draw the outside seam as illustrated from 8 through 12 to 17. The curve under the arm is drawn from 4 through 9 to 7. The inside seam of the under part of the sleeve is drawn from 4 through 13 to 16. The outside seam is drawn from 7 through 14 to 18.

Allow for seams when cutting the pattern. This pattern allows for fullness at the elbow, one-half of which should be above the point, 12, and the remainder below it. If the space for the gathers is too narrow, the elbow will have a pointed look; the correct space is about two and one-half inches.

After having cut out the pattern, place it on the lining so that the lengthwise threads of the cloth will extend straight down from the top of the sleeve. [The lengthwise lines in the illustration would correspond to the warp of the material.] Pin the pattern firmly to the material, and trace on all the seam lines. Cut out the lining and carefully baste the sleeve together on the tracing. Try it on and make any alterations necessary to secure a perfect fit, being careful not to stretch the upper edges.

Great care should be taken in putting the outside on the lining to have the warp of both materials draw together. When basting the sleeve together again it is best to take but one stitch at a time, so that neither the upper nor under part of the sleeve may become fulled, but will draw evenly, and not twist when placed in the garment.

Carelessness in basting the sleeve often causes the amateur to think it has not been properly put in, or is not cut correctly. Every remedy but the true one is tried, the arm's eye becomes disfigured and stretched by much basting and trying on, and the sleeves are ruined by too much trimming and twisting. Deep notches in the inside seam, opposite the elbow, will prevent the sleeve from drawing.

A sleeve too short from the shoulder to the elbow causes the inside seam to come over on top. The upper part of the sleeve will also wrinkle, and the wearer will find it difficult to raise her arms. A sleeve can be

made as tight as desired and still be comfortable if properly made. If back of waist is cut too narrow it will cause a well fitting sleeve to draw.

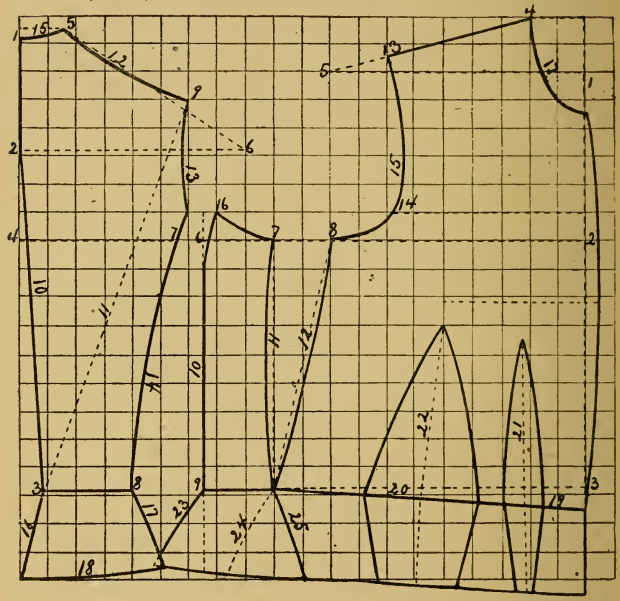
When the sleeve has been correctly put together, overcast the seams and finish the wrist with a bias piece of crinoline or light weight tailor's canvas, over which a bias piece of the material, or silk, should be faced. In basting sleeve on waist, place the inside seam two to two and one-half inches in front of upper-arm seam.

Arrange the fullness at the top so that it will be greatest about an inch in front of the shoulder seam, gradually lessening it as it nears the seams of the sleeve. The surest guide for deciding how to distribute the fullness is to see that the warp runs downward in a straight line from the shoulder in all materials in which the thread can be followed. If the sleeve be correctly made all the parts will fall naturally into shape. A plain sleeve shows any defect in making more plainly than large, full sleeves, and requires more skill in making.

One piece Sleeve:—To make the one-piece sleeve, pin the upper and under portion of the pattern from shoulder to elbow, thus making the outside seam come only to the elbow.

Furnishings for Waist:—The following list will give the amount of materials used for the inside of a waist: Lining, two yards; wadding, one-sheet; tailor's canvas, one-fourth yard; crinoline, one-fourth yard; bone casing, four yards; ribbon for binding seams, one bolt; basting cotton; one spool thread;

two or more spools silk; one card hooks and eyes; one-half yard silk cut on the bias, for facings; whalebone or substitute, an average of one-fourth yard for each seam; belt; shields.



PLAIN WAIST
WITH FRENCH BIAS DART.

WAIST WITH FRENCH BIAS DART.

The following measurements were used for drafting the waist illustrated:

Neck	12	inches
Bust	34	inches
Waist	24	inches

Front	19½ inches
Length of back	16 inches
Back balance	14½ inches
Under arm	8¾ inches
Chest	13 inches
Width of back	11½ inches
Shoulder	5½ inches
Dart No. 1	6 inches
Dart No. 2	6½ inches

Back:—To draft the back, first draw a horizontal line the length of paper. From the top of line measure down one-fourth of an inch to 1 for curve at back of neck. From 1 measure down four inches to 2, for shoulder slant; and from 1 measure down to 3 length of back to find the waist line. From 3 measure up to 4 the length of under-arm measurement.

From 1 measure out to 5 one and one-half inches for a twelve-inch neck, adding or deducting one-eighth of an inch for each inch more or less in the neck measurement. From 2 always measure out eight inches to 6 to find slant of shoulder seam. From 4 measure out half the width of back to 7, and from 7 measure up one inch to get arm's-eye curve.

On the waist line first measure out three-fourths of an inch to 3 for slant of seam in back, and from 3 for width of back on waist line measure three and one-fourth inches to 8, if a twenty-four inch waist. For each additional inch add one-fourth inch, and for each inch less deduct the same amount.

Draw a line, 10, from 2 to 3 for seam in back. Connect 5 and 6 with a dotted line, marking the length of shoulder seam, 9. Draw the back balance, 11, from the center of back through 9, and draw curve for shoulder seam, 12. 13 is the arm's-eye curve. 14 is an inward curve drawn from the arm's eye to 8. 15 is the neck curve drawn from 1 to 5. 16 is a straight line extending three inches below the waist and out to the main line. 17 is an outward curve extending three inches down and slanting one and one-fourth inches. 18 is a straight line at the bottom.

Front:—To draft the front draw a horizontal line the length of the paper and two inches from the edge. From the top of the paper always measure down to 1 two inches for shoulder slant. From 1 always measure down six inches to 2 to find the bust line, and from 2 measure down to 3 the length of under-arm measurement to find waist line.

From top of line measure out to 4 two inches for a twelve-inch neck, adding or deducting one-eighth of an inch for each inch more or less in the neck measurement. From 1 always measure out nine inches to 5 for correct slant of shoulder seam.

To find the width of front on bust line subtract from the bust measurement the width of the back, and for half the front divide the remainder by two. This amount, with two or more inches added to increase the bias, is the length of line from 2 to 6. From 6 measure in two and one-half inches to 7 for under-arm piece

for a twenty-four inch waist, add or deduct one-eighth of an inch for each inch more or less in measurement, and from 7 to 8 measure off the amount added on bust line, which in the illustration is two inches.

From 3 measure out to 9 the same number of inches as from 2 to 6. 10 is a straight line drawn from 9 to a point one inch above 6. From 9 measure in on the waist line two and one-half inches, and from that point draw a dotted line to 7 on the bust line. Then draw a slightly inward curve line for the seam of the under-arm piece. From the same point on the waist line draw a dotted line to 8, afterwards drawing a slightly inward curved line for seam of front.

Connect 4 and 5 with a dotted line, marking the length of shoulder seam, 13. One inch above the bust line draw to 14 half the width of chest. 15 is the arm's-eye curve drawn from the shoulder to 8, touching the chest line. From top of line 10 measure in one-half inch to 16, and from that point draw a curved line to 7 for top of under-arm piece. From 16 draw another curve extending down two and one-half inches and joining line 10. 17 is the neck curve drawn from 4 to a point one and one-half inches below 1, if a twelve-inch neck. One-eighth of an inch is added to or deducted from this measure for each inch more or less in the neck measurement.

To find the permanent waist line, subtract from the front measurement the number of inches across half the back at the neck, and measure the remain-

der from 4 down to the main line. That point determines the true waist line. Draw a line from that point to the point two and one-half inches in from 9. 19 represents the space between the center of front and the first dart, which is one and one-half inches.

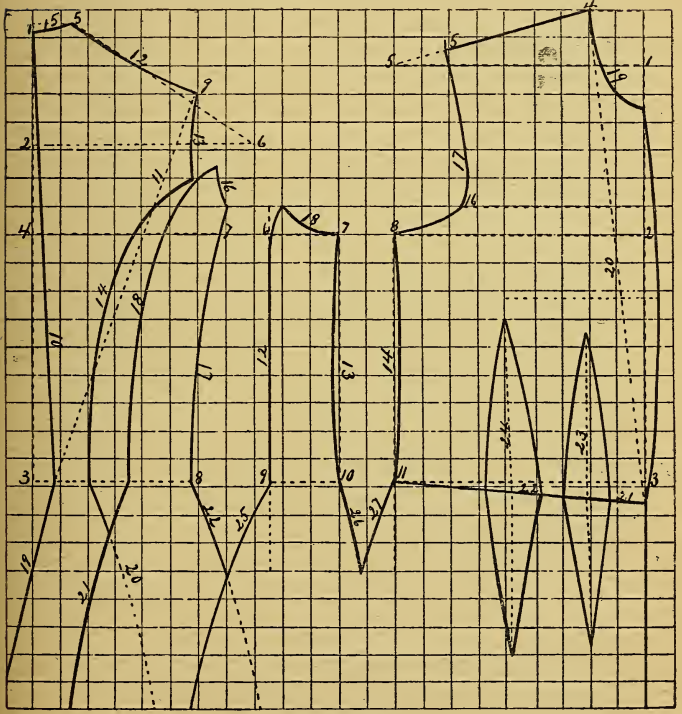
To find the quantity to put in the darts measure the back, which in this figure is six and one-half inches. Subtract this from the waist measure, which is twenty-four inches. This leaves seventeen and one-half inches. Divide this by two, as we are making but half the pattern. Then measure out eight and three-fourths inches on waist line, and the quantity remaining on this line is what we have to put in the darts. In this figure we have five and one-half inches for the darts. Since the first dart is always smaller than the second, we have one and one-half inches for the first dart and four inches for the other, which in the illustration is marked 20. The space between the darts should be three-fourths of an inch.

For a waist measurement over twenty-six inches, the space between the front and first dart, also the space between the darts, should increase one-eighth of an inch for each additional inch in the measurement.

21 is the center of the first dart, the outlines of which are curved to the waist, but straight below and one-half as large at the bottom as at waist line. 22 marks the center of the second dart, which extends one-half inch higher than the first. 23 is an outward curve extending down three inches and slanting one and one-fourth

inches. 25 is an outward curve slanting three-fourths of an inch.

Measure three-fourths of an inch above the second dart, and from that point out one-half an inch beyond main line. From 1 draw an outward curved line through that point to waist line.



PRINCESS DRESS.

PRINCESS DRESS.

The following measurements were taken for the princess dress illustrated:

Neck	12 inches
Bust	34 inches
Waist	24 inches
Front	19½ inches
Length back	16 inches
Back balance	14½ inches
Under arm	8¾ inches
Chest	13 inches
Width back	11½ inches
Shoulder	5½ inches
Dart No. 1	6 inches
Dart No. 2	6½ inches

Back:—To draft the back first draw a horizontal line the length of the paper and one inch from the edge. From the top of the line measure down to 1, one-fourth of an inch for the curve at the neck. From 1 always measure down to 2 four inches for shoulder slant, and from 1 measure down to 3 the length of back, to find the waist line. From 3 measure up to 4 the length of the under-arm measurement.

From 1 measure out to 5 one and one-half inches for a twelve-inch neck, adding one-eighth of an inch for each inch more, or deducting one-eighth of an inch for each inch less, in the neck measurement. From 2 always measure out eight inches to 6 for correct slant of shoulder seam. From 4 measure out to 7 half the width of back, plus one inch.

From 3 on the waist line, first measure off three-fourths of an inch for slant of seam in the center of the back. From that point measure out one and one-fourth inches for width of back at the waist line. Then leave a space one and one-half inches wide and measure out two inches to 8 for side body. These measurements are for a twenty-four inch waist. For each additional inch add one-eighth of an inch on the back and one-eighth on the side body, and for each inch less deduct the same amount.

Connect 5 and 6 with a dotted line and mark 9 the length of the shoulder. Draw 11, the back balance, from 3 to 9, thus determining the curve of the shoulder seam. Draw 12 from 5 to 9.

10 is the slant in the back drawn from 1 to the waist line. 13 is an inward curve for the arm's eye. 14 is an inward curve drawn from the arm's eye to the waist line. From 1 to 5 draw 15 the curve for the neck. 16 is the arm's-eye curve for the side body. 17 is a slightly curved line drawn from one inch above 7 to 8 on the waist line. 18 is the side body curve drawn from the arm's eye to the waist line. 19 is a straight line extending below the waist line and slanting as illustrated. 20, 21, and 22 are curved lines, also extending below the waist line and slanting.

Front:—For the front first draw a horizontal line the length of the paper and two inches from the edge. From the top of the paper measure down two inches to 1 for shoulder slant. From 1 always measure down

six inches to 2 to find the bust line; and from 2 measure down to 3 the length of the under-arm measurement, to find the waist line.

From the top of the line measure out to 4, two inches for a twelve-inch neck, adding one-eighth of an inch for each additional inch, or deducting the same amount for each inch less, in the neck measurement. From 1 always measure out nine inches to 5 for correct slant of shoulder.

To find the width of the front on the bust line, subtract the width of the back from the bust measurement, and for half the pattern divide the remainder by two. The number of inches obtained, plus two inches for the under-arm dart, is the length of the bust line from 2 to 6. Measure the same number of inches from 3 to 9. For the under-arm piece, measure in from 6 two and one-half inches to 7 for a twenty-four-inch waist, adding an eighth of an inch for every inch larger and deducting the same amount for every inch smaller, and from 7 measure to 8, two inches for the under-arm dart.

From 9 measure in on the waist line to 10, the same amount as from 6 to 7, for width of under-arm piece on the waist line, and from 10 measure out to 11 two inches for width of dart on the waist line. 12 is the straight line extending from 9, at the waist line, to one inch above 6 and curving in one-half inch at the top. 13 is the slightly curved line connecting 7 with 10 at waist line. 14 is another slightly curved line connecting 8 and 11.

Connect 4 and 5 with a dotted line, and mark the length of the shoulder seam, 15. One inch above the bust line measure out to 16 one-half the width of the chest. 17 is the arm's-eye curve draw from the shoulder to the bust line, touching the chest line. 18 is the curve for the top of the under-arm piece. 19 is the curve for the neck drawn from 4 to the point one and one-half inches below 1 for a twelve inch neck, varying this measure one-eighth of an inch for each inch more or less in the neck measurement.

To find the permanent waist line subtract from the front measurement the number of inches measured from 1 to 5 on the back of neck, and measure the remaining number of inches from 4 to the main line as indicated by dotted line 20. And from that point draw a line to 11 on the waist line. 21 is the space between the center of the front and the first dart, which is one and one-half inches. 22 is the second dart, which is three-fourths of an inch from the first.

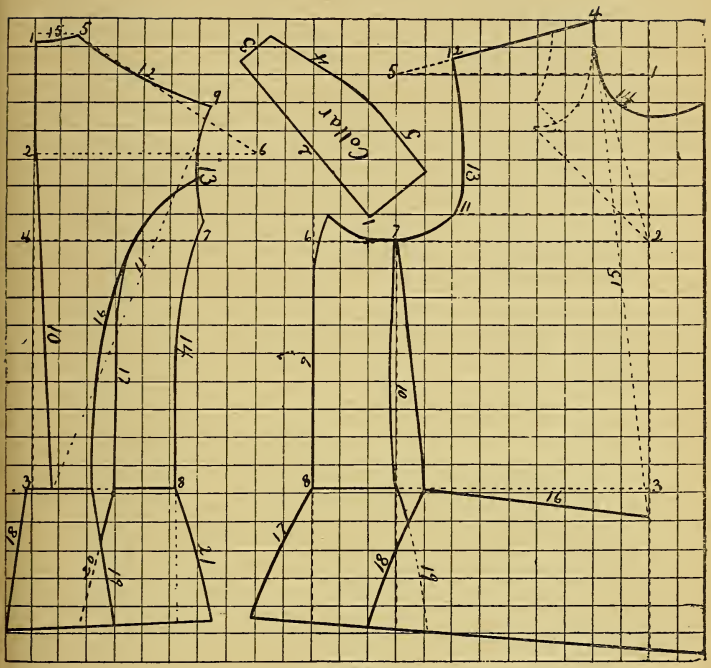
For a waist measurement over twenty-six inches, the space between the front and first dart, also the space between the darts, should increase one-eighth of an inch for each additional inch in the measurement.

To find the quantity to put into the darts measure the width of back on the waist line, which in this figure is six and one-half inches. Subtract this from the waist measure, which is twenty-four inches. This leaves seventeen and one-half inches, which, divided by two, for half the pattern, gives us eight and three-

fourths inches. Measure this out on the waist line, and the quantity remaining is the amount to be put into darts.

Since the first dart is always smaller than the second, measure off one and one-half inches for the first and two inches for the other. 23 marks the straight line in the center of the first dart, and 24 marks the second, which slants slightly. The sides of the darts are slightly curved lines. The darts extend below the waist line, as indicated in the illustration. 25 is a slightly curved line extending below the waist, and slanting as illustrated. 26 is a curved line slanting three-fourths of an inch, and 27 is a curve slanting one and one-fourth inches.

This pattern can also be adapted to different styles of wrappers. Fullness can be allowed either from the neck or from the chest line for a yoke, and they can be made either with or without a fitted lining.



JACKET.

JACKET.

The following measurements were used for drafting the jacket illustrated:

Neck	12 inches
Bust	36 inches
Waist	26 inches
Front	19½ inches
Length back	16 inches

Back balance .....14½ inches
Under arm ..... 8¾ inches
Chest ....14 inches
Width back .....12 inches
Shoulder .... 5½ inches

Back:—To draft the back first draw a horizontal line the length of the paper and two inches from the edge. For the curve at the neck, measure down on the line to 1, one-fourth of an inch. From 1 to 2 always measure four inches to find shoulder slant, and from 1 measure down to 3 the length of the back to find the waist line. From 3 measure up to 4 the length of the under-arm measurement.

From the top measure out to 5 one-and one-half inches for a twelve-inch neck, adding one-eighth of an inch for each additional inch, and deducting the same amount for each inch less, in the neck measurement. From 2 always measure out to 6, eight inches for slant of shoulder seam. From 4 measure out to 7 half the width of the back, and from 7 measure up one inch for the curve of the arm's eye.

From 3 mark off three-fourths of an inch for the slant of the back seam. Then measure out one and one-half inches for width of back on waist line. Leave a space three-fourths of an inch wide, and measure out to 8, two and one-fourth inches for the width of side body on the waist line. These measurements are for a twenty-six-inch waist. For each additional inch in the waist measurement allow one-eighth of an inch on the back

and one-eighth on the side body. For each decreasing inch in the waist measurement take off the same amount.

Connect 5 and 6 with a dotted line, and mark the length of the shoulder. Draw the back balance, 11, from the center of the back to 9, and for the shoulder draw 12 a slightly curved line. 13 is the arm's-eye curve drawn from 9 to the point one inch above 7. 10 is a straight line drawn from 2 to the waist line. 14 is a slightly inward curved line, drawn from 7 to 8.

15 is the curve at the neck, drawn from 1 to 5. 16 is an inward curved line drawn from the point in the arm's eye one and one-fourth inches above line 14 to the waist line. 17 is a curved line beginning one inch below the dotted line, marking the width of back, and extending to the second mark on the waist line, outlining the curve of the side body. 18 is a straight line extending five inches down from the waist line, and slanting outward three-fourths of an inch. 19 extends down five inches, and slants three-fourths of an inch. 20 extends down the same number of inches, but slants one and one-fourth inches. 21 is an outward curved line extending down five inches and out one and one-half inches.

Front:—When drafting the front of the jacket, draw a horizontal line the length of the paper and two inches from the edge. From the top of line measure down to 1 two inches to determine shoulder slant. From 1 always measure down six inches to 2 to find the bust line, and from 2 measure down to 3 the length of the under-arm measurement, to find the waist line.

From the top of line measure out to 4 two inches for a twelve-inch neck, allowing one-eighth of an inch for each additional inch in the neck measurement, or deducting the same amount for each inch if the neck measure is less. From 1 always measure out to 5, nine inches to obtain correct slant of shoulder seam.

To find the width of the front on the bust line subtract the width of the back from the bust measure, and for half the front, divide this amount by two. The number of inches obtained is the length of the line from 2 to 6. Measure out the same number of inches from 3 to 8. From 6 mark in to 7, three inches for the width of the under-arm piece for a twenty-six-inch waist, add or deduct one-eighth of an inch for each inch more or less in measurement. From 8 mark in the same number of inches for width of under-arm piece on the waist line.

Draw line 9, extending it one inch above 6. One-half of an inch in from this point draw an outward curve connecting it with line 9, one inch below 6. Draw dotted line, 10, from this point to 7, and make it slightly curved for the seam of the under-arm piece.

One inch above the bust line, measure out to 11 half the width of the chest. Connect 4 and 5 with a dotted line, and mark 12 the length of the shoulder. 13 is the arm's-eye curve, drawn from the shoulder to the bust line, touching the chest line.

Draw curve from top of line 9 to 7 for arm's eye curve of under-arm piece. 14 is the neck curve drawn from 4 to the point one and one-half inches below 1, if

a twelve-inch neck. Allow one-eighth of an inch for each additional inch in the neck measurement, or deduct the same amount if the neck measures less than twelve inches.

To find the permanent waist line subtract from the front measurement the number of inches measured across the back of the neck from 1 to 5, and measure the remaining number of inches from 4 to the main line. From this point draw 16 the correct waist line. Connect 7 with the waist line. 17 is an outward curve extending five inches below the waist line, and slanting two inches. 18 and 19 are curved lines extending down from the waist line five inches; 18 slanting two inches and 19 one inch.

When cutting the jacket allow generous seams, especially under the arm. Cut the lining, tracing all the seams. Baste together and try on, to see if any alterations are necessary. Cut the outside by the lining and trace to correspond, so that the jacket will fit smoothly. A light weight interlining adds a great deal to the fit of the garment.

A tight-fitting jacket should be boned, except in the back seam, and until the bones become fitted to the form it should always be worn buttoned.

Thorough pressing also adds a great deal to the fit of a jacket. If made with darts, one will be found sufficient for a slender figure. Use tailor's canvas or hair-cloth for stiffening the fronts, using a double thickness in the lapels. Shape the outside of the jacket and stitch the

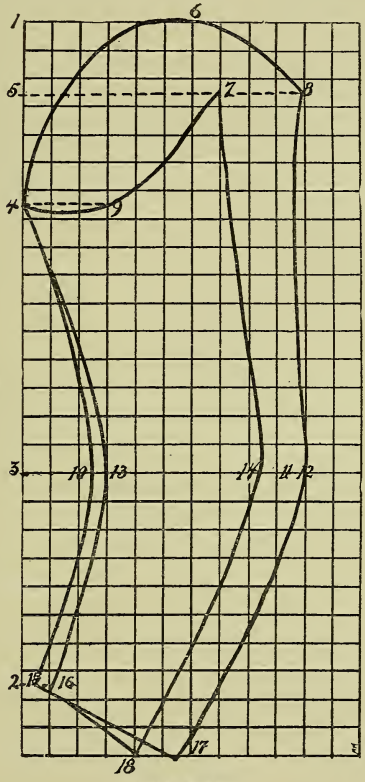
seams, bottom and front, before putting in the silk or satin lining, which, when fitted in and lightly tacked to the seams, should be hemmed to the outside.

The illustration shows a double-breasted effect and a coat collar.

Collar:—In the separate cut of collar, 1 is the center of the back, which is cut on a bias; 4 to 5 is the edge sewed to the neck of the jacket; 3 is the front of the collar; and 2 is the edge which is turned down.

Cut the collar from a double thickness of tailor's canvas, and stitch back and forth the same as on a coat collar. Put on the outside, and when finished, sew the right side to the jacket first, and blind stitch the back on.

Jacket Sleeve:—The measurements used for drafting the jacket sleeve illustrated were:



JACKET SLEEVE.

Outside length	26 inches
Shoulder to elbow	16 inches
Outside arm's eye to elbow	13½ inches

Inside arm's eye to elbow	9½ inches
Arm's eye	12 inches
Elbow	12 inches
Hand	8 inches

To draft the jacket sleeve, measure the outside length on the fold of the paper from the edge up to 1. To find the slant of the bottom of sleeve measure up from the edge of paper two and one-half inches to 2. From 1 measure down to 3 the length from the shoulder to the elbow, to find where the elbow will come in the pattern. From 3 measure to 4 the inside length from arm's eye to elbow. From 3 measure up to 5 the outside arm's eye to elbow measurement.

Measure out from 1 to 6 one-half the arm's eye measurement, to find the top of the sleeve. The width of the sleeve is found by measuring out from 5 to 8 one-half of the arm's eye measurement plus four inches for the upper portion and from 5 to 7 one-half the arm's eye plus one inch for the under portion. From 4 measure out to 9 one-fourth of the arm's eye, for the curve of the under-arm portion. From 3 mark in two and one-half inches for the curve of the sleeve at the elbow.

From 10 measure out to 11 one-half of the elbow measurement, plus one inch to 12, so that the upper will be wider than the under portion of the sleeve.

To make a sleeve fit nicely the under part should curve more sharply than the upper. To give this effect measure from 10 to 13, one-half of an inch, and from 13 to 14 the difference between the elbow measurement and

the width of the upper. From 2 mark in one-half of an inch to 15 for the bottom of the upper portion of the sleeve and from 15 to 16 three-fourths of an inch for the under portion at the wrist. The upper part of the sleeve is two inches wider at the wrist than the under; hence for an eight-inch hand the upper would be five and three-fourth inches wide and the under four and one-fourth inches. For the upper measure from 15 to 17 the required width at the wrist. Connect 16 and 18 for the under part of the sleeve at the wrist.

For the top of the sleeve curve from 4 through 6 to 8. For the inside seam of the upper draw a curved line from 4 through 10 to 15. Draw the outside seam as illustrated from 8 through 12 to 17. Draw the curve under the arm from 4 through 9 to 7. The inside seam of the under part of the sleeve is drawn from 4 through 13 to 16. The outside seam is drawn from 7 the highest point of the under-arm curve through 14 to 18.

Allow seams when cutting the pattern. The fullness at the elbow should be gathered so that one-half will be above the point, 12, and the remainder below it. If the space for the gathers is too narrow, the elbow will have a pointed look. The correct space is about two and one-half inches.

After having cut out the pattern, place it on the lining so that the lengthwise threads of the cloth will extend straight down from the top of the sleeve. [The lengthwise lines in the illustration would correspond to the warp of the material.] Pin the pattern

firmly to the material, and trace on all the seam lines. Cut out the lining and carefully baste the sleeve together on the tracing. Try it on and make any alterations necessary to secure a perfect fit.

Great care should be taken in putting the outside on the lining to have the warp of both materials follow the same line. Baste the sleeve together, taking but one stitch at a time, so that neither the upper nor under portions may become fulled, but will draw evenly, and not twist when placed in the jacket. Overcast the seams and face the sleeve with a bias piece of crinoline four or five inches deep. Stitch two rows across the sleeve, to simulate a cuff, before putting in the silk lining. Deep notches in the inside seam, opposite the elbow, will prevent the sleeve from drawing.

Arrange the fullness at the top, so that it will be greatest about an inch in front of the shoulder seam, gradually lessening as it nears the seams of the sleeve. If the warp of the material in the sleeve runs downward in a straight line from the shoulder, we may consider the fullness as evenly distributed. The tight coat sleeve shows very plainly any defect in making.

DRESS.

Dress that shows the exercise of taste and thought, is elevating to the home, and does much towards beautifying the world. When dress becomes a mere matter of display, it loses its charm and the sympathy of those who love the beautiful. The clothing of an individual,

to be attractive, should not be a matter of caprice, but should be worn with regard to definite laws of form and color, and should be in harmony with the surroundings and means of the individual. Beauty in personal appearance is often almost destroyed by a lack of understanding how not to spoil the beautiful gift of nature. The object of dress may be threefold: To cover, to warm, and to beautify.

In selecting the material for a gown, choose that which will add to, rather than detract from, the personal charms of the wearer. Dress should be pleasing to the eye; it should be comfortable to wear, for then one may forget it; and it should be suitable to the occasion, that it may leave no room for criticism. The plain woman should be very careful in selecting her gown to avoid the delicate tints. She should choose instead the more quiet, steadfast colors.

If a woman be tall and slender, her dress should be so made as to supply the fullness and softness needed; if she be tall and well proportioned, she will always look well in a tailor-made gown; but if she be short and stout, simplicity is her safeguard. A small woman may wear brighter colors than a large one. There are few women who look well in every style and in every color. Only those colors that clear the complexion should be chosen.

Colors which are not perfectly harmonious by contrast when placed side by side can be greatly modified by dividing them from each other with lines of black or white, gold or silver. In contrasting colors divided with a line of white the eye readily chooses for itself

the harmonizing color required. This explains why a dress of unbecoming color is made more becoming by soft lines of white lace about the throat and hands.

Care should be taken, not only in selecting the color of the dress, but also the material. Usually the lighter colors and delicate tints are most pleasing in the thin, light-weight materials. They are also more becoming and more suitable for house wear than the darker and more neutral tints, which are more suitable in heavy cloths, and in better taste for street wear.

In selecting the color for the street dress, it will be found that the same color as the hair or eyes, or that which harmonizes with them, will be most becoming. For instance, one who has black hair with dark blue eyes will find gray pleasing. The tone of gray to be selected, whether it be of a pure black and white or tinged with blue or pink, depends upon the complexion. The pink grays are the best to clear a complexion with delicate coloring, while the blue gray is best suited to one with a good deal of color. Gray is one of the most trying colors, and should be selected with great care, because the complexion is affected most by the tints in the gray, which are many.

With the dark or black hair the dark greens and dark reds would be becoming, or dark blue if the skin is not sallow. If the hair is chestnut brown, then the red browns may be worn; but if the hair shades to gold or yellow, then the golden browns would be most suitable. A bit of pink can be introduced, producing a most pleasing effect.

FACTS WORTH REMEMBERING.

Mercerized Cotton:—Is that which has been treated by a process invented by John Mercer, a Lancashire calico printer. He discovered that by steeping either the fiber or fabric from ten to twenty minutes in a caustic and syrupy potash lye and then cleansing it, the texture would shrink on drying, and would take more brilliant colors than the unmercerized fabrics.

Linen:—Linen, with a round, smooth thread, and as free from dressing as can be obtained, will produce the most satisfactory results in hemstitching. If the linen is not very soft, the threads may be more easily drawn if the material is first pressed between two wet cloths and then allowed to dry while under tension.

Damask:—Damask is more easily sewed after being washed, consequently many rinse the linen out in water, before hemming.

Selvedges:—Selvedges should be cut away for seams of any kind if they are to look smooth and flat. In wash fabrics a selvedge is liable to draw up in laundering.

Skirt Braids:—Skirt braids should be shrunk by wetting them thoroughly in warm water.

Haircloth:—Haircloth is used as an inter-facing for a skirt. It should be shrunk first, so that it will not pucker or draw in the skirt. To shrink haircloth wet a piece of cloth the size of the haircloth and roll both together on a roller and leave them thus for at least twelve hours. Shake out and hang on a line until nearly dry and press with a hot iron. Haircloth should never be folded when shrinking.

Pressing Seams:—Garments fit better if well pressed in making. Seams should be pressed on a board with a curved surface, so that the edges will not be visible on the right side of the garment. A sleeve board which is narrow enough to go into a sleeve, should be used in pressing open the seams of sleeves. It is not advisable in dress making to press through a damp cloth as tailors do. Dress materials are so comparatively light and thin that wet treatment would injure color, finish and texture, causing them to draw up and look rough, thus entirely destroying the delicate appearance of the fabric.

Shrink all cotton materials for shirt waists, so that when laundered the garment will fit as well as when first made.

Mending Gloves:—Kid Gloves should be mended with cotton thread, using the button-hole stitch.

Sewing Machine:—The best sewing machines are those that run smoothly and lightly and have not many or complicated arrangements for regulating the tension or length of stitch.

To secure good results on a sewing machine, the worker should be thoroughly familiar with the rules issued with the machine for its special management; it should be kept clean and well oiled, only the best machine oil being used; and care should be taken in selecting a needle the correct size for the thread used.

433 90

THE LIBRARY OF CONGRESS

THE LIBRARY OF CONGRESS

HECKMAN
BINDERY INC.
NOV 90
N. MANCHESTER,
INDIANA 46962

LIBRARY OF CONGRESS
0 014 061 882 2